

December | 09

## Student Pulse Academic Journal

### **The Methamphetamine Crisis in American Indian and Native Alaskan Communities: Toward A New Research Agenda**

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## **Introduction**

The prevalence of methamphetamine (ME) use among American Indians and Native Alaskans (AI/NAs) is strikingly high in comparison to other ethnic groups in the U.S. (Iritani, Dion Hallfors & Bauer, 2007). However, few datasets are available that allow for estimates to characterize the problem or describe the variation of the ME problem among tribes. Only recently has anecdotal information emerged about the spread of ME use and manufacture into tribal communities in newspapers, radio stories, wire services, agency reports, and on websites. Due to the lack of stable data and other unique problems of rural populations, multi-agency approaches that include counties, states, federal law enforcement agencies, and other institutions to combat ME use, distribution, and production, have been difficult to organize. In order to develop optimal responses to this crisis, it is necessary to better understand the extent of the problem and the various factors that lead to ME abuse. Research and data collection collaborations between federal and tribal professionals working in the areas of law enforcement, social services, drug court system, domestic violence, services for children, mental health, prosecution, juvenile justice, housing, and addictions are needed to curb this devastating problem (Bubar, Winokur & Bartlemay, 2007).

## **History of Methamphetamine**

ME has been part of the U.S. drug culture for more than 40 years. Methamphetamine hydrochloride is commonly known as “speed,” “meth” and “chalk.” Highly pure forms of ME that are smoked form are referred to as “ice,” “crystal,” “crank,” “crico,” “cri-cri” and “glass.” In fact, there are there are 435 street names for ME (National Congress of American Indians [NCAI], 2006). ME is a white, odorless, bitter-tasting crystalline powder that can be dissolved in water, alcohol and other beverages (e.g. coffee). It was developed from its parent drug, amphetamine and used in nasal decongestants and bronchial inhalers. ME is classified as a Schedule II stimulant by the U.S. Drug Enforcement Agency (DEA), which means it has a high potential for abuse with severe psychic or physical dependence liability and is available only through a prescription. It is indicated for the treatment of narcolepsy and ADHD, but these medical uses are limited and the doses are much lower than those typically abused (NIDA, 2006b).

ME is produced from common decongestants containing ephedrine or pseudoephedrine, in combination with ordinary products such as iodine crystals, battery acid, red phosphorous, and

anhydrous ammonia (a widely used liquid fertilizer). The drug, especially the ME “cooked” in local labs, may be a powder ranging color from white or yellow to peanut butter brown or red. The crystal ME made by Mexican drug cartels resembles glass shards or larger crystals and are highly potent and pure (Dreisbach, Hickler & Koester, 2006).

### **Origins of Methamphetamine**

Amphetamine was first synthesized at Universität Berlin by Romanian chemist Lazar Edeleanu in 1877 and originally named phenylisopropylamine (Erowid, 2006). The first wide use of amphetamine occurred in the 1940s, when it was used by Japanese, American, and German military personnel to combat fatigue and increase performance, as well as by Japanese factory workers, during World War II. In 1940, ME was marketed as “methedrine” by Burroughs Wellcome. By 1942, dextro-amphetamine and ME were reported to be widely available. After the war, surplus military stocks appeared on the Japanese market, culminating in an epidemic of abuse. Despite the passage of a 1951 stimulant control act, 1953 marked the height of the Japanese amphetamine epidemic, in which an estimated 2 million people in a population of 88.5 million were users and were experiencing psychotic symptoms (Frontline, 2006; Meredith, Jaffe, Ang-Lee & Saxon, 2005). The U.S. military dispensed amphetamine in 1950 to 1953 to troops in Korea. By 1959, reports emerge of the contents of amphetamine-containing inhalers being injected (Erowid, 2006; Frontline, 2006).

Illicit amphetamine production reportedly began between 1959 and 1963. During this period, the California Attorney General requested that injectable ampules of amphetamine be removed from the marketplace. Various pharmaceutical companies withdrew several formulations of ME from the domestic market. As a result, underground ME labs emerged in the California Bay Area. Illicit producers of ME, known as “cooks”, who were making the drug for West Coast motorcycle gangs are thought to have discovered that ephedrine from cold medicines could be used to produce ME, which is twice as potent as amphetamine (Frontline 2006). Motorcycle gangs (e.g. Hells Angels) took control of the new product, and ME abuse throughout the West Coast. Other reports contend that biker groups originally used the “P2P method” of ME synthesis, using phenyl-2-propanone (P2P), aluminum, methylamine, and mercuric acid. Because passage of the Federal Chemical Diversion and Trafficking Act of 1988 led to the development of strict federal

controls on P2P, bikers manufacturers replaced the P2P method with the ephedrine/pseudoephedrine reduction method, which use a phosphorous-based precursor such as red phosphorous or hypophosphorous acid. These and other law enforcement efforts targeting motorcycle gangs, coupled with the development of simpler methods for ME synthesis, had the effect of shifting control of the U.S. illicit ME market to Mexican-based traffickers in the early 1990s (Meredith, Jaffe, Ang-Lee & Saxon, 2005; Brouwer, Case, Ramos, Magis-Rodriguez, Bucardo, et al., 2006).

As it turns out, the ephedrine-pseudoephedrine reduction method is cheaper, simpler, and more efficient than the P2P method, and yields a purer, more potent and more addictive D-isomer of ME. This newer method of synthesis allowed “superlabs” to develop, with the capacity to produce ten or more pounds of ME in one production cycle. Superlabs have spread extensively throughout Mexico and the American Southwest. Precursor compounds are diverted from legitimate use and smuggled across the borders of the U.S., Mexico, and Canada for use in clandestine ME production in both the Southwest and Northwest. For example, elemental lithium can be isolated from camera batteries and used as a catalyst in the ammonia/alkali method of reduction of ephedrine into ME. Anhydrous ammonia, a common fertilizer, is often siphoned from storage tanks or tanks are stolen from dealers and farms (Denehy, 2006). Also known as the “Nazi method,” ephedrine-pseudoephedrine reduction method has become popular in some western regions of the U.S., resulting in the production of crystal ME or “crank.” The name “crank” is said to derive from bikers’ using motorcycle crank cases to transport the substance (Meredith, Jaffe, Ang-Lee & Saxon, 2005; Brouwer, Case, Ramos, Magis-Rodriguez, Bucardo, et al., 2006). Mexico-based groups are believed to control 70-90 percent of ME production and distribution in the U.S. Increased availability of these drugs at reduced prices has led to a parallel rise in local drug consumption (Brouwer, Case, Ramos, Magis-Rodriguez, Bucardo, et al., 2006).

### **The Spread of Methamphetamine Manufacture and Use to Indian Country**

Despite the limited amount of data available and the dependence on anecdotal reports, it is clear that ME use intensified in the rural, Midwest, and Southwest U.S. in the 1990s and gradually invaded AI/NA communities. Rural states have been hard hit by the epidemic because of the easy access to raw materials used to manufacture this illicit drug; the ease in setting up

laboratories in isolated areas; and the quick dispersal of ME odors , which allows it to be produced without it being noticed (Denehy, 2006). Geographic isolation, rural poverty, and closed social networks in rural communities may contribute to the appeal of ME and the challenges of eradicating it. Mexican cartels understood these dynamics and moved into a number of AI reservations to commence ME production, promotion of use, and sales (Associated Press, April 29, 2007). Remote settings and limited law enforcement resources decrease the likelihood of getting arrested during a drug sale or during ME production. Travel between communities and counties to buy, sell, or use drugs and or access services, makes users difficult to identify, track, and treat. Low paying, tedious jobs make ME use and selling ME for large profits enticing. Inadequate mental health and drug counseling services and the vast distances required to access them can be substantial barriers to treatment. (Dreisbach, Hickler & Koester, 2006). Sales for local lab productions have been supplemented by a substantial increase in highly pure and potent crystal ME imported from Mexico and distributed throughout the country in both urban and rural areas (Dreisbach, Hickler & Koester, 2006).

The ME crisis has reeked havoc on the already vulnerable health of AI/NA communities. Short and long term health risks from ME abuse include depression and anxiety from withdrawal, hyperthermia, convulsions, physiological and psychological brain injury, dental problems (“meth mouth”) and skin abrasions ( due to scratching at imaginary “meth bugs”), children’s poisoning from exposure to the drug and precursor chemicals in small labs (causing a myriad emotional cognitive and physical problems), various birth defects due to prenatal exposure, increased risk of HIV and hepatitis infection due to the increased libido associated with ME intoxication, and progression of HIV infection if present (NIDA, 2006b; Denehy, 2006; Bubar, Winokur & Bartlemay, 2007).

### **Early Efforts to Address the Methamphetamine Problem in Indian Country**

The earliest mention of ME use by AI/NAs on Lexis Nexis Academic was in testimony provided by Ron Martin, Executive Director of the San Diego American Indian Health Center, to the Senate Committee on Indian Affairs on May 21, 1998 on unmet Indian healthcare needs. He described severe under-funding and the resulting difficulties of serving urban AI/NAs. At about the same time, the ME Interagency Task Force, headed by U.S. Attorney General Janet Reno, formed in

response to a provision in the Comprehensive Methamphetamine Control Act of 1996. The Task Force met for the first time in Washington, DC, on May 4, 1998. They convened various times throughout 1998 and 1999 in Washington, DC, Omaha, NE, and San Diego, CA. However the first direct mention of the ME crisis in rural America was not addressed by this Task Force until their final town hall meeting on November 30, 1999. There were no representatives from any AI/NA specific agency include in this Task Force (Methamphetamine Interagency Task Force, Final Report, March 2000).

In July 2003, the U.S. Commission on Civil Rights released a report titled “A Quiet Crisis: Federal Funding and Unmet Needs in Indian Country,” which described the substandard state of policing, justice systems, corrections, and health and human services provisions when compared to the rest of the U.S. (Bubar, Winokur & Bartlemay, 2007). Between 2003 and 2006, a number of tribal councils, government agencies, media outlets, and healthcare provider began to investigate and document the growing ME crisis among AI/NAs. In 2005, The Substance Abuse and Mental Health Services Administration (SAMHSA) estimated that ME use has grown to 1.7 percent in the Native population in comparison to 0.7 among American Caucasians (OAS, 2007). According to the publication Trends in Indian Health, produced by the Indian Health Service (IHS) in 2000-2001, AI/NA populations experienced a 164 percent increase in the number of drug-related deaths, corresponding to the increase of ME in Indian communities (Bubar, Winokur & Bartlemay, 2007). Requests to IHS providers for ME rehabilitation increased from 137 in 1997 to 4,946 in 2004. However, the average healthcare provided by the IHS or through contracted services met only ten percent of the need (Bubar, Winokur & Bartlemay, 2007).

The movement to address the ME epidemic in AI/NA gained momentum in 2006. On April 5<sup>th</sup>, the Senate Committee on Indian Affairs held an oversight hearing on the problem of ME in Indian Country, where a number of tribal leaders and members of the National Congress of American Indians testify to the devastation wrought by ME abuse. On April 12<sup>th</sup>, Mark Evans, Tactical Intelligence Supervisor at the New Mexico Investigative Support Center, released a reported commissioned by the Bureau of Indian Affairs titled “National Methamphetamine Initiative Survey: The Status of the Methamphetamine Threat and Impact on Indian Lands” (Evans, 2006). On October 4<sup>th</sup>, SAMHSA awarded \$49.3 million in FY 2006 grant funding for 14 new and one supplemental discretionary grants to tribal organization for prevention, treatment, and

recovery support services. The funds were designated to “support relevant programs to promote mental health and prevent suicide, mental illness and substance abuse—especially methamphetamine use.” (SAMHSA Advisory, October 4, 2006). About six weeks later, President George W. Bush proclaimed November 30<sup>th</sup> as National Methamphetamine Awareness Day and a coalition of the Department of Interior, the Partnership for a Drug-Free America, the Department of Health and Human Services, the Office of National Drug Control Policy, and the National Congress of American Indians contributed \$300,000 for a public awareness campaign. The press released stated that “before the forging of this coalition, there was no national anti-ME media campaign tailored to Indian Country.” (McMullin, Wolfe & Deaktor, 2006).

The barriers to initiating a community, tribal, and federal response to the ME crisis in Indian Country were outlined by Jefferson Keel, First Vice President of the National Congress of American Indians in his April 2006 testimony to the Senate Committee on Indian Affairs. Keel made five major points: that IHS and tribal health programs are funded at 60 percent of the level needed to provide adequate health care services; also, tribes receive minimal federal funds to develop child abuse prevention and foster care programs; in addition, tribal governments are ineligible to apply and receive funds from the Title XX Social Services Block Grant Program, despite the fact that tribal population numbers are used to determine individual state allocations; that tribes received none of the 16.2 million for ME abuse prevention awarded to 11 rural communities by the U.S. Health and Human Services in 2005; and finally, a significant percentage of Tribal TANF funds must be diverted for substance abuse services, counseling, and drug testing (Bubar, Winokur & Bartlemay, 2007).

### **Documenting Methamphetamine Use in the United States**

It is estimated that over 26-35 million people internationally abuse ME or amphetamines, compared to 15 million abusers of cocaine and less than 10 million regular abusers of opiates. Regions that use high levels of ME include Asia, Australia, Scandinavia and the U.S. (Meredith, Jaffe, Ang-Lee & Saxon, 2005). The U.N. World Drug Report calls ME the most abused hard drug on earth; the U.S. alone has 1.4 million users, and the number is rising (Frontline, 2006).

ME use in the U.S. is measured by three federally funded national surveys: Monitoring the Future (MTF), Community Epidemiology Work Group (CEWG) and the National Survey on Drug Use

and Health (NSDUH). MTF is a survey funded by the National Institute on Drug Abuse (NIDA), National Institutes of Health (NIH), and conducted by the University of Michigan's Institute for Social Research. The study has tracked 12<sup>th</sup> graders' illicit drug abuse and related attitudes since 1975; in 1991, 8<sup>th</sup> and 10<sup>th</sup> graders were added to the study. CEWG is a NIDA-sponsored network of researchers from 21 major U.S. metropolitan areas and selected countries who meet semiannually to discuss the latest epidemiology of drug abuse. NSDUH, formerly known as the National Household Survey on Drug Abuse, is an annual survey conducted by the Office of Applied Studies, SAMHSA. Other government agencies, such as the The Drug Abuse Warning Network (DAWN), also collect national data. DAWN is a SAMHSA-funded and operated public health surveillance system that monitors drug-related visits to hospital emergency departments (EDs) and drug-related deaths investigated by medical examiners and coroners (ME/Cs). (NIDA, 2006a).

The 2005 MTF survey of student drug use and attitudes reported 4.5 percent of high school students had used ME within their lifetimes, while 8<sup>th</sup> graders and 10<sup>th</sup> graders reported lifetime use at 3.1 and 4.1 percent, respectively. However, both surveys showed recent declines in ME abuse among youth. In CEWG's report for 2004-2005, ME abuse did not decrease in any of the 21 CEWG areas and increased significantly in 9 CEWG areas, 8 of which were already considered to be high use areas. In some areas, ME had replaced crack as the drug of choice. Sharp decreases were reported in small ME labs incidents and an increase in seizures; however, ME was still readily available and of high purity. According to the 2005 National Survey on Drug Use and Health (NSDUH), an estimated 10.4 million people age 12 or older (4.3 percent of the population have tried ME at some time in their lives. About 1.3 million reported past-year ME use and 512,000 reported current (past-month) use (NIDA, 2006a).

DAWN reported a greater than 50 percent increase in the number of ED visits related to ME abuse between 1995 and 2002, reaching about 73,000 ED visits or 4 percent of all drug-related visits in 2004. Treatment admissions for ME abuse also increased from 21,000 or 1 percent of admission in 1992, to 150,000 or 8 percent of all admissions in 2004. In 1992, only 5 states reported high rates of treatment admissions; by 2002 this number increased to 21 states (NIDA, 2006b).

### **Available Data on Methamphetamine Abuse in AI/NA Communities**

Currently, what is known about drug use specifically among AI/NA comes largely from school-based research with adolescents, as well as small research studies, limited data from small surveys by tribal councils, and limited information from IHS (Spears, Longshore, McCaffrey & Ellickson, 2005). Since school-based surveillance efforts began more than 30 years ago, higher rates of drug use have been reported among AI/NAs than among most ethnically defined groups. One study demonstrated that AI/NA or Caucasian race; lower SES; residence in the west or south; having an ever-incarcerated father; marijuana, cocaine, intravenous drug use; and high novelty seeking were associated with greater likelihood of past year ME use in multivariate analyses (Iritani, Dion Hallfors & Bauer, 2007).

According to a NSDUH Report covering 2002-2005, AI/NAs aged 12 or older were more likely than members of other racial groups to have used an illicit drug at least once in the past year (18.4 percent vs. 14.6 percent) and to have a past year illicit drug disorder (5.0 vs. 2.9 percent). Consistent patterns were found within age and gender groups (OAS, 2007). NSDUH reported only on the “non-medical use of prescription-type stimulants” (2.0 vs. 1.2 percent) and offered no measures of ME use (OAS, 2007). The 2004 NSDUH survey did not ask specifically about crystal ME, but reported that the past year ME use was highest among young adults aged 18-25 compared to youths and other adults (Iritani, Dion Hallfors & Bauer, 2007).

At this time, IHS does not publish data specifically on number of visits to medical and mental health care providers that are due to ME, and data regarding the actual numbers of patients with a diagnosis of ME abuse are difficult to obtain (Bubar, Winokur, and Bartlemay, 2007). This may be due to lack of drug testing ability and concerns for personal safety (Dreisbach, Hickler, & Koester, 2006). Much of the research on effective prevention and treatment approaches in these communities has been on alcoholism (Freese, Obert, Dickow, Cohen & Lord, 2000). Many AI/NA have moved off reservations and into urban areas; there is a paucity of data on drug use in urban populations as well (Spear, Crèvecoeur, Rawson & Clark, 2007).

Although data is limited, it does seem clear that the highest rates of adolescents use among ethnic groups are found in AI/NAs, with Mexican Americans and Caucasian Americans following behind. Oetting, Deffenbacher, Taylor, Luther, Beauvais & Edwards (2000) speculated why this might be the case. Possible reasons included geography, in that ME use in U.S. Western states are nearly twice those found in Eastern states, and there are likely to be more AI and

Mexican Americans residing in Western states. Also, living along the distribution route for large scale ME production may be factor in ME among these youth. However, geography does not explain the entire difference. Asian American are more likely to come from Western states, but their rate of ME use is relatively low. Drug use of any kind however, tends to be low among Asian American high school students (Oetting, Deffenbacher, Taylor, Luther, Beauvais & Edwards, 2000).

Research demonstrated that while AI/NA students have higher rates of ME than other ethnic groups, they also have very high rates of use of other drugs. Thus, higher ME use could be part of a general pattern of high drug use for this population. Some researchers speculate that actual difference between ethnic minority youth and other youth in rates of ME use may be even greater than these school based data suggest because school drops are not among those surveyed and drug use is high among this unassessed population of youth (Beauvais, Chavez, Oetting, Deffenbacher & Cornell, 1996). Swaim, Beauvais, Chavez and Oetting (1997) have shown that, when data on in-school students are corrected to include rates of drug use among dropouts, rates of drug use in the entire age cohort of minority youth are even higher than those found among non-minority youth. ME users are almost all multi-drug users, with 90 percent using marijuana and about 90 percent using a drug other than marijuana and ME in the last month. The most frequently used drugs by ME users, outside of marijuana and alcohol, are amphetamines, cocaine, and hallucinogens, suggesting a preference for drugs that produce excitement and intense sensations. However, many ME users also use depressants, downers, and heroin (Oetting, Deffenbacher, Taylor, Luther, Beauvais & Edwards, 2000).

### **Gap Areas in Data Collection from AI/NA Populations**

While studies of adolescents have provided critical information regarding drug use among AI/NA adolescents, the research to date leaves unanswered a number of important questions regarding the nature and extent of drug use among AI/NAs more generally. Rumbaugh Whitesell, Beals, Mitchell, Spicer, Novins, et al. (2007) and Szelemko, Wood & Thuman (2006) recently outlined the data needed to more effectively address disparities in drug use and drug use disorders in AI communities. These researchers highlight four important areas of unanswered questions. First, information on drug use across the life span in AI/NA communities is lacking: Are rates generally higher among younger age groups, as seen in other ethnic groups? Are disparities

in drug use stable across age cohorts? Answers to these questions have important ramifications for intervention and treatment. Second, in most studies of drug use, AI/NA have been treated as uniform groups, reflecting what cross-cultural researchers refer to as “ethnic gloss.” There are more than 500 federally recognized tribes and cultural homogeneity is unlikely. Are there significant variations in patterns of substance use and abuse? Are there variations in drug use among genders? This information is also needed to design or modify effective prevention and treatment efforts. Third, does AI/NA drug use among adolescents lead to higher rates of drug abuse or dependence. Because the most serious outcomes associated with drug use are associated with abuse or dependence, it is important to assess the prevalence of drug use disorder. Finally, alcohol use in AI/NA communities has been extensively examined and documented. Data is needed that separates alcohol use from the use of other substances (Rumbaugh Whitesell, Beals, Mitchell, Spicer, Novins, et al., 2007; Szlemko, Wood & Thurman, 2006).

### **Infrastructures for Data Collection**

There are already in place several federal and inter-tribal agencies in place for data collection and addressing AI/NA healthcare needs that can collaborate in the interest of data collection and characterization of the ME problem. This potential vast network poses several problems for program and research integration, including separate funding streams and coverage gaps, agency “turf issues,” different agendas and institutional philosophies, and limited resources (Walker, Silk Walker & Singer, 2007).

The U.S. Department of Interior Bureau of Indian Affairs and the U.S. Department of Health and Human Services’ SAMHSA Office of Applied Studies, NIDA, and the IHS are the lead federal department offices needed to fund and monitor this effort. Other federal level agencies need for this effort include U.S. Department of Justice’s DEA, Bureau of Alcohol, Tobacco, Firearms and Explosives, Bureau of Immigration and Customs Enforcement, Center for Substance Abuse Treatment, Federal Bureau of Investigation, National American Indian Housing Council (NAIHC), National Center on Addiction and Substance Abuse (NCASA), National Clearinghouse for Drug and Alcohol Information, National Drug Intelligence Center, National Indian Health Board, National Native American Law Enforcement Association (NNALEA), The White House Office of National Drug Control Policy, and U. S. Commission on Civil Rights.

Federal agencies represented “in the field” that are designed for data collection include the Center for Disease Control and Prevention’s Office of Minority Health and Health Disparities AI/NA Epidemiology Centers. These 12 tribal epidemiology centers are mandated to provide surveillance for disease conditions, epidemiological analysis, interpretation, and dissemination of surveillance data, investigation of disease outbreaks, development and implementation of epidemiological studies, development and implementation of disease control and prevention programs, and coordination of activities with other public health authorities in the region.

A search of the Internet reveals that all states have substance abuse agencies that are attempting to address the ME crisis. These include task forces, health boards, coalitions, clearinghouses, working groups, initiatives, networks, prevention programs, legislation trackers, watch groups, prevention projects, alliances, and a host of other interested groups (for example, see [www.methresources.gov](http://www.methresources.gov)).

The federal government departments listed above have funded or are currently funding a number of agencies that can be tapped for assistance in data collection to characterize the ME problem in AI/NA communities. These include the National Congress of American Indians, The One Sky National Resource Center for AI/NA Substance Abuse Services, the Tribal Policy Institute, the Pacific Institute for Research and Evaluation, the Native American Research Centers for Health, and the Nanizhoozhi Center. Also, there are a number of universities that are also researching the ME problem as well as other AI/NA health concerns. These include, to only name a few, the Tri-Ethnic Center for Prevention Research at the University of Colorado, the Johns Hopkins Center for American Indian Health, the Center on Alcoholism, Substance Abuse and Addictions at the University of New Mexico.

Law enforcement is a critical source of information and can be used as one measure of the success of interventions. Healing to Wellness Courts (HWC) evolved out of the Drug Court movement from the 1980s, which was a response to the judicial and treatment systems’ failure to effectively address substance abuse and its related activity. States call their efforts Drug Courts, whereas tribes prefer Healing to Wellness Courts (Lovell, 2007). Drug courts can be an important source of information on ME in Indian Country. Much legislation has been directed at regulating the sale and use of precursor chemical in order to curb the production and availability of ME. Cunningham and Liu (2005) have demonstrated that ME arrests stopped rising and dropped 31 to

45 percent in 1989, 1995 and 1996, when precursor chemicals used by large scale producers were regulated. Increasing the under-staffed law enforcement efforts in Indian Country and requiring structured data collection on ME arrests and lab seizures would also be a value source of information (Honahni, 2007; Woodis, 2007).

### **Linking Research to Prevention and Treatment**

The following list of suggestions for a new research agendas were compiled from Mansergh, Purcell, Stall, McFarlane, Semaan, et al., (2005); Silmere and Stiffman (2006) Iritani, Dion Hallfors & Bauer (2007):

- Identify the tribes and regions affect by ME manufacture and abuse
- Increase surveillance and monitoring to follow ME use and associated high risk behavior, particularly in tribal subpopulations, child-bearing women, and diverse age groups
- Explore the natural history of ME use and its attraction in rural and urban areas with high AI/NA populations
- Explore the association of ME use with sexual risk behavior and incidence of HIV, Hepatitis B and C, and other sexually transmitted infections in subpopulations
- Develop and test prevention and risk reduction interventions to decrease risk behavior of non-addicted ME users
- Systematically explore the effectiveness of treatment components to reduce ME abuse
- Develop and test structural and policy-related interventions to reduce ME use
- Train health care providers in data collection in order to document ME prevalence, symptoms of use and abuse, and referrals to community services
- Systematically evaluate the effectiveness of community awareness building, risk reduction, and treatment programs to decrease ME users in order to create new programs based on proven effectiveness
- Increase collaboration among various public health agencies and coordinate research efforts
- Address use of other substances use separately from ME
- Prioritized the implementation of the Resource and Patient Management System (RPMS) throughout the IHS facilities and programs that provide health services to AI/NA populations

through its 144 Service Units comprised of hospitals, health centers, school health centers, health stations, satellite clinics, and village clinics.

Stakeholders in the ME crisis in AI/NA communities need to address the large gaps in knowledge that currently exist, and federal, state, local, tribal and research agencies must collaborate to accomplish this goal. Once accurate reliable data and program evaluations are in place, tribal health officials and program specialists, with the support of federal agencies and funding, should use this information to implement more effective community programs. The ever-present challenge for tribal communities is to determine how best to allocate limited resources among prevention, treatment, and policy activities to achieve maximum epidemiological benefit (Mansergh, Purcell, Stall, McFarlane, Semaan, et al., 2005).

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