Methcognition: Taking the Information to the Front Lines
Authors: Eric S. See & George E. Hendricks

This article has three purposes. The first is to provide enough information about Methamphetamine (Meth) markers to equip virtually untrained front line professionals who work with children to be able to recognize the markers. The author's coined the term Methcognition to address this issue. The second is to motivate these professionals to understand and accept their role in dealing with the consequences of the Meth epidemic. The third purpose of the article provides an analysis of a survey from human service professionals on their understanding and awareness of Meth.

The Methamphetamine Epidemic

The responsibility of society to protect children, its most vulnerable citizens, is widely recognized and accepted. In recent years, the production and use of Meth have placed thousands of innocent children at serious risk of injury or death. Meth production and use in Western society have reached the level of an epidemic which has been noted by the media. The subject was recently highlighted in *Newsweek* and on the National Geographic Channel. A 2009 PBS documentary, "The Epidemic," also addressed the issue.

According to the National Drug Intelligence Center, the total economic impact of Meth in the United States was $23.4 billion in 2009 (compared to $215 billion for all drug use). This statistic further highlights the devastating effects that this particular drug is having on our society. This article points out that parenting children and Meth use is a dangerous combination.

In spite of the new recognized danger, drug use, especially Meth use, is still accepted by some sub-groups. Although the impact and dangers of drug abuse are clear, illegal drugs continue to hold a strong grasp on popular culture. Songs like *Cocaine* and television shows

glorify the life of the cocaine user. As far as we can tell, no popular artist has made a similar case for Meth. But the number of users, including parental users is still high.

There are so many factors that support Meth use, that a new society-wide approach is needed. The authors believe that a multidisciplinary approach, symbolized in the new term *Methcognition*, is needed. Methcognition implies and encourages a move from the realm of detached academic thought and speculation to the multidisciplinary practice and broad awareness in the field. Stated simply, Methcognition involves thinking wholistically about Meth to increase general societal knowledge about the broad and many interacting levels of this deadly drug. An important step to bring Methcognition into reality is to provide individuals such as school social workers, teachers, counselors as well as first responders (law enforcement child protective services) with the training and resources necessary to recognize the signs and symptoms of Meth abuse and *to motivate them to help to protect children.* Service providers to children come from a broad spectrum of professions (e.g., education, ministry, justice, social work, etc.), and the understanding (Methcognition) of Meth must become a part of the professional education of all.

Millions of teachers, school social workers, school nurses, school resource officers, members of the clergy, athletic coaches, support staff, and community volunteers are already in place and are working with children every day. If the children living in Meth environments are to receive the protection they need and deserve, these professionals and pseudo-professionals must become involved. In contrast to the pop culture view of the glorified life of a drug dealer, the life of a Meth user or addict is anything but glamorous. The threat to innocent children is especially serious when their adult caregivers are manufacturing Meth. An example of the exposure experienced by many children living with Meth-using caregivers was reported by Swetlow (2003) in California. This scenario described five children ages 1 to 7 living without

electricity or heat. The children's play area was overrun with used hypodermic needles and dog feces. The bathroom had sewage backed up into the tub, and all of the children were infected with Hepatitis C. The children had needle marks on their hands, feet, and legs resulting from accidental contact with syringes. This type of environment is obviously not conducive to proper physical health, to adequate educational preparation, or to development of a child's sense of security, necessary components in the child's environment (Maslow, 1954).

Expanding the Team: The Multidisciplinary Approach

To an important question: Who in society has the primary responsibility to protect children from the dangers of Meth abuse? In response, most people will mention police officers or social workers. Others may look to those working in probation, in parole, or in corrections for the answers. These individuals certainly do need to be properly educated because they play a key role in this ongoing struggle. It is the case, however, that information about most clandestine labs discovered across the country come from sources other than the police or child protection agencies. Children can be exposed to Meth long before the production lab is reported. Given this reality, more than the efforts of law enforcement or child protective services are needed to save the children victimized by such exposure.

The nature of the current Meth epidemic is such that it cannot be adequately addressed by using only the methodology and personnel of the criminal justice system or child protective services. A holistic approach involving a broad range of modalities and personnel from many disciplines and professions beyond criminal justice and child protective services must be developed. We label this broad, all inclusive approach Methcognition. The concept of Methcognition needs to become a reality not only for social workers and criminal justice professionals but for many other professions as well. Human service workers have been trained

to approach this or any threat to children with special sensitivity. The needs of innocent children who have been drawn into the Meth vortex are a special case. Human service professionals must be knowledgeable and sensitive to dual victimization and trauma. These children, if they are in Meth labs that are discovered and destroyed, are usually separated from their families and furthermore are often deprived of their toys and familiar objects. These children very likely have experienced violence and often physical and sexual abuse. Such abusive experiences are frequent among Meth exposed children (Austin & Osterling, 2006; Howard, 1994; Magura & Laundet, 1996; Wolock & Magura, 1996; Zuckerman, 1994). This dual victimization must be considered and integrated into policies and practices that protect the children involved.

Fortunately, the professional framework needed to accomplish this task is already in place and Methcognition can provide key individuals with the training and resources necessary to recognize the signs and symptoms of Meth abuse and to motivate them to help to protect children. Millions of teachers, school social workers, school nurses, school resource officers, members of the clergy, athletic coaches, support staff, and community volunteers are already in place and are working with children every day**.** *If children living in Meth environments are to receive the protection they need and deserve, these professionals and pseudo-professionals must get involved.*

The Meth problem can be addressed on three different levels: first through the education of human services professionals who may be trained to recognize the "markers" evident in Meth exposed children, second through the identification, location and destruction of Meth laboratories; and third, through the advocacy for and protection of children who are discovered in Meth laboratories.

Methcognition also implies a move from the realm of academic detachment and speculation to practice in the field. Stated another way, the information regarding Meth must be taken from the classroom and laboratory to the field where it can be used by the individuals on the front lines.

A major challenge for the criminal justice system is that, more often than not, law enforcement must rely on personnel outside of the criminal justice system as the means of identifying the location of Meth production facilities. Calls and complaints about suspected Meth labs and operations made to local police departments or departments of social services are often the first information that law enforcement has about Meth activity. A large number of labs are found accidently. When calls are made to one of the criminal justice agencies or to child protective services, then standard protocols to protect Meth-exposed children can be put into place.

Without the broad sources of information regarding possible Meth labs, the proper authorities may never be aware of the labs that place children and the larger society at risk. As a result, children may never get to the protocol intervention stage and may never receive interventions.

Training for Professional Responders (Police officers, social workers)

The professionals who can address the problem can be divided into two groups: (1) law enforcement and social services and (2) individuals such as teachers, nurses, clergy, coaches, etc who have possible contact with meth-exposed children.

The sad reality is that many local police departments and social service agencies do not have adequate training or expertise regarding Meth. Although specialized knowledge and

training often exist at the state level, such expertise does not often extend to the local level where the true first responders are usually formed.

New police officers in all states go through some form of basic training that teaches them what they need to know to enforce the law in their jurisdictions. This training often can last for weeks or months, depending on the state. While examining the specific curriculum taught to new police officers in Ohio and North Carolina, two diverse states, the authors were surprised at the lack of focus and absence of detail about the Meth problem. Although the normal cautions and overviews were provided, the basic theme of the material centered on protecting the officers' safety. Especially relevant from a social workers perspective was the realization that missing from the training were the proper procedures for dealing with any children who might be present.

Like any other component of the criminal justice system, basic police officer training is ongoing and a constantly changing. Changes must be made to officer training as new situations and demands concerning Meth are required. This ongoing training presents an opportunity for police officers to become educated on the topic or to receive a refresher course with current, updated information.

Similarly, local departments of social services, especially through their role in child protective services, are expected to be active participants in dealing with the Meth problem once it is discovered that children are involved. Disturbingly, local social service agencies are facing an exponential growth in the number of Meth-related cases. Child protective services are called on to investigate complaints and take the appropriate action under the drug-endangered child policy. Child protective services agencies are typically understaffed across the United States. Unfortunately, this increase in cases also coincides with historic budget cuts to state and local social service providers.

One of the serious challenges faced by law enforcement and child protective services is how to effectively and humanely, handle the children of parents who create and operate Meth production labs. When the labs are discovered, the parents are often incarcerated. But, what happens to the children? Manning (1999) reported that if children were present at a lab seizure, there were often no standard procedures regarding their treatment. Often the police had to transport the children to relatives. Kyle and Hansell (2005) estimated that a minimum of 40% of social service agencies across the country are reporting more children in need of placement because of conditions related to Meth use and production and that this number is higher in more rural areas.

According to Holley (2005), a national expert on Meth, there are certain items that social workers and criminal justice officials need to be aware of and look for on visits where Meth might possibly be present:

> You are the eyes and ears of your local police department. You are looking for canisters of anhydrous ammonia and discarded cans of Red Devil Lye accumulating in the yard. Cooks go through thousands of packages of Sudafed or Actifed to get the ephedrine they need to make Meth. They will dispose of the discarded packaging in their burn pile. You might notice large quantities of Coleman fuel, lithium batteries, and books of matches in the garbage, starter fluid, Murantic Acid for cleaning swimming pools, rock salt, toluene or iodine. Be alert to unusual odors. The fumes may have the overwhelming odor of cat urine, or smell like the chemistry lab when you were in high school. (p. 13).

Recent Legal Steps

In 2006, North Carolina followed similar laws in other states by monitoring the amount of pseudoephedrine purchased. In the same year, North Carolina also imposed harsher penalties

for exposing children under the age of 18 to drugs within the home environment (NC House Bill 1536). Many states have passed such bills to toughen the standards associated with drug abuse. In 2008, the North Carolina Division of Social Services established the Drug Endangered Child Policy for dealing with Meth. The protocol specified the procedures that social workers should follow when a Meth laboratory was identified. It also discusses the importance of human service professionals working with various agencies such as law enforcement to provide a multidisciplinary perspective. The protocol also specifically provides information on how to protect, advocate and support children in the removal process. This protocol provides social workers with guidelines to be followed when dealing with Meth-exposed children. It also provides guidance for working with such other multidisciplinary team members as law enforcement and emergency services. The policy specifically notes that all reports of children being exposed to suspected or confirmed Meth laboratories must be investigated by local departments of social services. Other states have similar protocols (North Carolina Division of Social Services, 2008).

Professional Training for the Eyes and Ears of Meth Workers

As is often the case with many major societal problems, the Meth epidemic has been addressed in piecemeal fashion. What is needed is a comprehensive societal perspective. More in-depth training is required to fully prepare social workers and criminal justice workers for the dangers associated with Meth and to increase their knowledge base. In addition, an integrated approach would help to prepare school social workers and criminal justice professionals and many other professionals who might interact with Meth-exposed children to deal with the possible child abuse associated with Meth use. A major component of such a holistic approach would involve many professionals who regularly encounter children. This broad approach would

include teachers, school nurses, school resource officers, etc. These professionals need to be educated about the underlying societal issues that have impact on children in the Meth-abusing family. They need to be motivated to "buy into" the process to which they can make valuable and often singular contributions.

It is important that all human service workers with children have a basic understanding of the biological, psychological, and social facets of the problem (Engel, 1977). This information is intended to develop an appreciation of the biological, psychological and social indicators of the presence of Meth and to encourage all professionals who work with children to become involved in monitoring "the Meth markers" of children with which they work. Suggested readings in the bio-psycho-social area that can serve as good references include: Halkitis (2009), Holley (2005), Reading (2009), and Weisheit and White (2009).

The complaints that come to child protective services are not usually about the behavior of the children or their emotional stability but instead involve allegations regarding the environment or possible abuse of children. Child protective services, like law enforcement, have no way to know about a Meth environment until a specific Meth complaint is made. In the case of child protective services, it is possible that information regarding a possible lab might have resulted from a visit to the home by a social worker or some other human services professional. Current instruction regarding Meth generally prepares social workers and criminal justice officials to recognize, identify, and understand the potential physical dangers to their clients and themselves. Sadly, many child advocates have been in and around Meth labs without even realizing it. Beyond the safety issues, however, the broader social issues resulting from Meth use and production, especially the traumatic experience of innocent children, are not ordinarily covered and adequate training is far from universal.

The community officials who are the most likely to first notice that something is wrong with a particular child are the teachers who are actively engaged in the child's life on a daily basis. Next to the child's parents, educational professionals have more contact and influence on children than anyone else. But school counselors, coaches, clergy may also have significant contact. It is important to educate, sensitize, and train such persons to take note of the signals or markers provided by children who are associated with Meth production. For example, the production of Meth often gives rise to certain odors that may be present on the clothing of children. Also, children may have respiratory problems resulting from inhaling the toxic fumes arising in Meth production. School attendance may be poor because of the drug-exposed lifestyle.

A Status Report in the War on Meth

We have not been able to locate a state or local agency that has developed a plan for the broad training necessary to meet the criteria for Methcognition. The basic question of who is responsible for providing basic Meth awareness and training has not been answered. At present time, it is apparent that there is no overriding authority or plan in any state for providing and controlling the content of education and training materials. Millions of individuals across the country (teachers, school nurses, police officers, probation and parole officers, social workers, members of the clergy, mental health professionals, and others) have the kind of contact with children which provide the opportunity to observe Meth markers. Providing these professionals with training and knowledge to perform task and to motivate them to accept the role is an important challenge that must be addressed before Methcognition becomes a reality. It is the children whom these other professionals serve who need protection.

It is clear that both initial and additional in-service training is needed for many professions. What remains unclear is who needs to provide this training and in what format it should be provided. There are two basic paths to the delivery of effective cognition. The first focuses on the educational institutions (e.g., technical colleges, 2- and 4-year programs, and graduate programs) that train human service providers. Beyond that, little is done. A second path focuses upon professionals already employed in the field. Although drug education courses or, at a minimum, components of other courses, are relatively common in criminal justice and social work programs, they are rare or nonexistent in nursing, teacher training, and seminary programs. These courses, when they exist, also tend to focus on the larger nature of the drug problem in general and not specifically on the Meth problem.

The holistic approach to Methcognition does not need to present detailed information about the science or chemistry involved in the production of Meth, nor with detailed methods concerning the decontamination of persons affected nor the cleanup of a lab or processing site. The approach needs to focus on providing everyday information to help distinguish Meth-involved children from children in other problematic situations.

The first bit of information that general human service workers need is the realization that the majority of Meth labs that are discovered in North Carolina, as well as across the entire country, are simply stumbled upon (North Carolina Division of Social Services, 2008). An individual who discovers a lab may be visiting the home for another reason and may not suspect Meth abuse when first arriving at the home. **In all cases when the professional in the field believes that he or she has entered a home with a Meth laboratory, the worker needs to leave the residence and notify the police immediately.**

Second, professionals must know what to look for. They must know the warning signs that indicate potential Meth exposure and abuse as well as the presence of a lab. Once the professionals are aware of the markers and know when and how to protect themselves, a major component of Methcognition will have been achieved.

Observed Behavior in Meth Exposed Children

The following list includes signs and symptoms of behaviors and characteristics that are often exhibited by children who have been exposed to Meth. This list may be helpful to those individuals interested in identifying *potential* Meth-exposed children. *These behaviors do not guarantee or prove the presence of Meth but are often observed in Meth exposed children*.

Potential Check List Signs of Meth Use, Abuse, or Exposure

- ✓ Respiratory problems
- ✓ Delayed speech and language skills
- ✓ Elevated risk for kidney problems and leukemia
- ✓ Lack of immunizations and medical care
- ✓ Malnourishment
- ✓ Developmental Problems
- ✓ Poor dental health
- ✓ Hygiene Issues
- ✓ Stange body odor resembling cat urine
- ✓ Lice
- ✓ Obesity
- ✓ Chemical burns
- ✓ Severe neglect
- ✓ Physical abuse
- ✓ Sexual abuse
- ✓ Teen pregnancy
- ✓ Pornographic materials
- ✓ Advance sexual knowledge
- ✓ Behavioral issues
- ✓ Cognitive Issues
- ✓ Emotional issues
- ✓ Mental health issues
- ✓ Alcohol and drug abuse
- ✓ Isolation
- ✓ Lack of sleep
- ✓ Low self esteem

- ✓ Poor social skills
- ✓ Poor peer relations
- ✓ Drug use
- ✓ Lack of boundaries
- ✓ Delinquency
- ✓ Inappropriate conduct
- ✓ Violent behavior
- ✓ Poor school performance/attendance problems
- ✓ Easy attachment to strangers
- ✓ Unusual care of younger siblings
- ✓ Caring for an incapacitated parent or sibling
- ✓ References to dangerous animals
- ✓ References to booby traps in and around the home
- ✓ Discussing large amounts of cold medicine containing ephedrine
- ✓ Participation in after school activities (lack of wanting to go home)

Survey Results: The Truth Hurts

In March of 2012, a survey was conducted during a meeting of an organization in North Carolina dedicated to developing and extending services to children and youths in the state. Active members of the group include school social workers, case managers, volunteer organizations, children and youth workers, police, probation, and parole officers, substance abuse counselors, as well as others involved in providing services to children.

The survey was designed to determine the level of understanding and awareness these professionals had concerning Meth. Topics on the survey included general Meth awareness and knowledge, as well as ingredients in Meth, and the ways it can be taken. Approximately 125 individuals were at the conference, and 115 completed surveys were returned. Out of those returned, 15 had to be discarded due to missing data. The final sample contained 100 surveys. Results are discussed below.

The first of the questions were asked on a Likert Scale. Respondents were asked to read a statement, and then select the answer that best matched their view. The choices were as follows: SA=strongly agree, A= agree, N=no opinion, D=disagree, and SD=strongly disagree.

Question. I understand how Methamphetamine is manufactured.

SA = 8	A = 49	N = 10	D = 23	SD = 10	N=100

The response to this question indicates that the majority of respondents felt that they understood how Methamphetamine is produced. In a similar fashion, the majority of respondents also felt that they knew the common ingredients used to manufacture Methamphetamine.

Question. I know the common ingredients used to manufacture Methamphetamine.

SA = 7	A = 44	N = 16	D = 18	SD = 15	N=100

For Methcognition to become a reality, those who work directly with children, or are in the position of planning drug prevention programs for children need to understand how Methamphetamine is manufactured, and what the common ingredients are. This is critical because those professionals who are in the home environment of the children need to be aware of the warning signs of Methamphetamine production. Having more than half of the respondents familiar with the ingredients, and having and understanding of the process seems to be a good start.

Is it accurate however? Do the professionals working with children really understand Meth? Do they really understand how it is made, and how it can be taken? Do they know any of the hundreds of street names Meth goes by? Additional questions on the survey were designed to ascertain this information, and the results were not encouraging.

Question. List three common ingredients used to manufacture Methamphetamine.
Question. In what ways can Methamphetamine be taken?
Question. List three common or street names for Methamphetamine.

These three questions were asked to determine if the respondents could actually list the ingredients in Meth, or could actually list the various ways it could be taken. Meth can be taken in a number of ways. To name just a few, it can be smoked, snorted, taken in pill form, injected, or taken vaginally or orally, or anally. It was determined by the researcher that naming three ways in which Meth could be taken would count as a correct answer. In a similar manner, if the respondent could name three ingredients in Meth, or three common street names, the answer was counted as correct. The chart below summarizes the correct and incorrect answers.

Question	Percentage Correct	Percentage Incorrect	N
List 3 Ingredients	26%	74%	100
List 3 Ways to Take Meth	26%	74%	100
Three Common	16%	84%	100

Names			

It is apparent that there is a disconnect between what the respondents think they know about Meth, and what that were able to convey on the survey. If this is correct, than what accounts for this disparity? The most likely culprit would appear to be Meth specific training, or a lack of training. If those in the field are not properly trained, then they cannot be expected to be knowledgeable on the topic. In addition, if their agencies are not providing the training, or sending their employees for training, then the agencies themselves most likely lack concrete policies and procedures on the topic.

The respondents were asked a series of questions to determine the level of training the professionals in the survey had received. In addition, they were asked about the specific policies and procedures currently in place their agency. The majority of the respondents had a four year degree. Perhaps they had learned about Meth as a part of their academic degree programs.

Question. I received adequate training in my undergraduate program in preparation for working with Methamphetamine exposed families.

SA = 4%	A = 9%	N = 19%	D = 19%	SD = 49%	N=100

It is clear in looking at the responses above, that this was not the case. Combining the disagree and strongly disagree category, a full 63% of the respondents disagreed with this statement, while combining agree and strongly agree yields only 13%.

Question. I received adequate training in my undergraduate program in preparation for working with Methamphetamine exposed families.

Categories collapsed to Agree, No opinion, and Disagree

A=13%	N=19%	D=68%	N=100

To further complicate the issue, a deeper look into the responses reveals some troubling information. When looking only at the thirteen people who agreed that their undergraduate work prepared them for dealing with Methamphetamine exposed families, their success rate in identifying common ingredients, ways that Meth can be taken, and common street names was troubling. Only eight of the 13 people could list three common ingredients in Meth. This unfortunately was the high water mark. Only seven of the respondents could correctly list three

ways in which Meth could be taken, and only three respondents could list three common street names for Meth. It is clear that in this sample of respondents, the college curriculum as currently structured was not able to provide professionals in the field with the needed information.

Two agency specific questions were asked, both in a yes or no format.

Question. Have you received formal training on Methamphetamine from your agency?

Question. Does your agency clearly define what is expected of you if you find yourself in a home that is serving as an active Methamphetamine lab?

Received training	Yes 14%	No 86%	N=100
Clear Expectations	Yes 19%	No 81%	N=100

These respondents indicate that a significant majority of respondents have received no formal Meth training from the employer, and that for most of the respondents, no specific polices are in place in the event that an active Meth lab is discovered.

Finally, the likert scale was used in a question to determine if the respondents felt they needed additional training on Meth.

Question. I need more training on the dangers of methamphetamine.

SA = 44%	A = 43%	N = 9%	D = 1%	SD = 3%	N=100

As noted by the above response, 87 out of 100 people surveyed felt the need for additional training. The results of this survey indicate a need to increase the level of methcognition among the respondents. Why is this matter so urgent? Each home that functions as a Meth lab is a hazard. The risk of explosion or exposure to deadly chemicals is ever present. No one should know better than the professionals who responded to this survey the potential

dangers of that environment, as well as the vast array of services children growing up in that environment may require. Out of the one hundred professionals surveyed, seven had actually been in a home that was later confirmed to have been a Meth lab, and twenty six had worked with children who were confirmed to have been exposed to Meth.

This study was small and only focused on 100 professionals working with children. While it cannot be generalized to the population of professionals in North Carolina, it demonstrates the need for methcognition to become a reality. The general population cannot be expected to understand the dangers of the Meth epidemic if the professionals working in the field do not. The general public cannot be expected to understand the production process, the ingredients, or the slang term for Meth when the professionals in the field do not. The principles of methcognition must be established, and put into place.

Persons with Formal, Official , Contact with Children

Classroom Teachers

Classroom teachers are the professionals most likely to have regular contact with children. More than any others they are in a position to observe Meth-related signals. Over a period of 13 years, children spend almost 682 seven-hour days in school. For this reason, it is especially important that classroom teachers be familiar with the signs and symptoms that can be apparent with children who are involved in the Meth situation. Without a good understanding, these behaviors and traits may go undetected for years, posing grave dangers to the children involved and to society.

Children often display certain characteristics associated with living with parents who are abusing Meth. Teachers are in a unique position to be the first responders to assist children from

Meth-involved families. Physical characteristics such as the smell of a child, emotional characteristics such as a depressed mood, and behavioral characteristics such as restlessness, agitation, and exhaustion may help educators to recognize the possible exposure to Meth and may prompt them to seek assistance for the child.

On rare occasions, at a parent-teacher conference, classroom teachers also may confront a caregiver or other significant adult in a child's life who is under the influence of Meth It is important to understand the characteristics of someone who is abusing Meth. Some of the more common characteristics and obvious signals include mood fluctuations, violent behavior, poor impulse control, and lack of attention to basic hygiene.

Because classroom teachers will not normally make home visits, they should be familiar with the characteristics displayed in the classroom by Meth-exposed children. Haight et al. (2005) observed that if children attend school smelling like cat urine, they may be involved with Meth. An ethnographic study by Asanbee, Hall, and Bolden (2008) revealed that preschoolers in the Meth-exposed group displayed symptoms of more aggressive behavior than did peers from homes not associated with Meth use. By being trained in Methcognition and sensitized to their role, teachers can become familiar with the connection between Meth and aggressive behavior.

Support Personnel: The Next Line

Support personnel such as school social workers, school counselors, school nurses, and school resource officers can also play an important role in implementing a program of Methcognition. In most situations, school social workers are one of the few school employees who often, even regularly, conduct home visits related to issues involving the children. School social workers can investigate school attendance issues, discuss behavioral issues with parents, advocate for homeless families, and provide the basic needs (e.g., food, clothing, and shelter)

required for effective education. In essence, school social workers connect the home, the school, and the community. This concern for children may manifest itself in referrals for counseling, establishment of attendance contracts with the school, or the provision of school supplies for students. School social workers need to be especially cognizant of the signs indicating that they may be in a Meth lab while they are on a home visit. Many social workers, especially school social workers, have been in Meth labs without realizing it. When dealing with children, professionals in the field need to watch for issues related to basic needs (i.e., food, clothing, and shelter). These professionals need to actively look for evidence that some children are being exposed to Meth or Meth labs. For example, poor hygiene, a consistent lack of lunch money, and the lack of appropriate clothing may be signs that children are being exposed School social workers also need to be aware of the possible connection between Meth and other forms of abuse.

Support Personnel: School Counselors

School counselors tend to have a hit-and-miss relationship with some students in the school. Counselors may be involved with students through classroom activities such as character education or through individual counseling regarding issues such as conduct, attention problems, and mood disorders. These issues can be the result of living in Meth-exposed families (Sroufe, Dougal, Weinfeld, & Carlson, 2000). Counselors need to be trained to identify potential Meth use by parents. Interestingly, not all children growing up in Meth-involved environments will develop mental health issues. Haight et al. (2005) observed that some Meth-exposed children develop positive peer relationships and perform well in the school environment. This difference only solidifies the need for a solid bio-psycho-social approach that emphasizes Methcognition.

Support Personnel: School Nurses

School nurses are the only school employees who may medically examine a potentially Meth-exposed child. A medical referral may come to the school nurse, for example, as a breathing difficulty. Because of the drug-addicted environment and neglect often seen in Meth environments, school nurses may function as the primary, and sometimes only, source of medical care. Consequently, school nurses are in the unique position of often being the first medical professionals to examine children affected by Meth (Roper, 2007). School nurses need to watch for biological concerns, such as poor dental health, respiratory problems, lack of proper and current immunizations, lice, obesity, and elevated heart rate (Kansas Meth Prevention Project, 2004). One interesting development concerns the possible confusion over Meth bugs and bedbug bites. Serious bedbug bites may resemble "bugs", or the picking at the skin associated with Meth use. The training of school nurses should prepare nurses to make this distinction.

Support Personnel: School Resource Officers

A policeman or deputy sheriff is often stationed in many public schools. They are usually labeled school resource officers. School resource officers deal with the legal side of school-related issues. In many states they are law enforcement officers working with either the sheriff's department or the police department, and have full arrest authority. They deal with such behavioral issues as assault, gang behavior, and the possession of drug paraphernalia, weapons, and pornographic material. The extreme nature of the Meth-abusing family causes concerns over drug involvement and pornography. While bringing pornography to school to show one's friends is certainly not a new phenomenon, studies show that a large percentage of Meth labs contain pornography (Zernike, 2005). While the presence of an adult magazine in a child's possession does not necessarily indicate a Meth lab as the culprit, like all of the other markers, it

is a *possible* sign. If brought to the attention of the school resource officer, the possession of pornography may be only the first sign, or may perhaps the tipping point indicating a more serious problem.

Persons without Formal, Official Contact with Students: Clergy, Coaches, Big Brothers, Big Sisters, etc

Part of the value of program in Methcognition is the realization that the community has many more resources than it may at first realize. Many people interact with children across the country on a daily basis. Armed with knowledge and training these people can act as additional eyes and ears in the quest to protect children from the effects of Meth. These individuals can be taught to look for the same physical characteristics and to detect the same markers as classroom teachers. Community volunteers, such as Big Brothers and Big Sisters, interact with children and are often in the child's home. Having these individuals trained in marker identification can provide important information not available from other sources.

Is it Meth or Something Else?

At this point, it must be stated emphatically that even if a child exhibits one, two, or perhaps more symptoms on the checklist, this evidence does not prove or guarantee that the child is being exposed to a Meth environment. So what exactly might it mean? There are several possible answers. First, it may not mean anything at all. Depending upon which characteristics are in question, the child may simply be from a poor socioeconomic background or may simply be lacking in basic hygiene skills. Second, a child displaying such characteristics might be from a home where a different kind of drug is being abused. If markers are detected or suspected, the responsibility of the human service professional is to convey their information to the appropriate law enforcement agency to determine if a child is being exposed to a Meth lab or environment.

At some point a reader, using the principles of Methcognition, will discover a child exposed to a Meth lab or environment. What happens then? As has been noted, training is sparse even for law enforcement and professionals in the criminal justice system and the overall goal of Methcognition is safety. The safety of the school worker, of the volunteer, of the police professional, and of the children exposed in the environment are all important. Bearing that in mind, no one but a trained expert should ever knowingly enter an active Meth lab. There is no reliable way for the average school worker or community volunteer to know if the lab in question is currently active. Again, safety for all involved is paramount. When an active lab is suspected or confirmed, the police must be notified immediately. After that notification is made, then the proper chain of command must be followed in the school or social service agency or community organization by which one is employed. If the children are still in the home, plans must be coordinated with the police and the appropriate social service agency to remove the children and to ensure that they receive proper medical attention. Methcognition alone does not shut the lab down or undo the damage children have already faced. It seeks to prevent further damage and provide children with the highest level or coordinated care and treatment possible.

It is worth noting again that the majority of Meth labs are discovered as the result of an accident. Whoever discovered that lab was not expecting it when they arrived at the premises. Methcognition seeks to tip the balance, to allow for the discovery of more Meth labs, and to provide for the protection of more children.

Regardless of the final outcome, Methcognition can be an aid in providing services to the family. If there are drug issues in a household, the same team of school leaders and community volunteers can provide a support network for the family in need, providing valuable referrals to community resources. If it turns out to be a neglect or abuse situation, again, those in a school

setting or active in the life of the child may be the first to pick up on the signs and symptoms. There are many more families in need of a helping hand than there are families running clandestine Meth labs. Nonetheless, the principles of Methcognition can still aid in the healing and recovery of the family unit.

Conclusion

The purpose of Methcognition is to provide broader community awareness and understanding and support. Children displaying the characteristics mentioned in this article are most likely in need of some type of intervention. Whether a child's specific situation requires simple assistance, a helping hand, or removal from the home can only be determined through professional investigation. The purpose and focus on Methcognition is to make as many individuals as possible aware of the potential signs of Meth abuse in order to provide the best chance for early intervention.

The authors are recommending the formation of school action resource teams, but schools vary as to funding and staff levels, and not all schools will have all of the listed personal. The idea of the team is to bring together school officials who have varying levels of involvement with the child. Recommended members are as follows: teachers, school resource officers, school social workers, school nurse, school counselors, coaches or club coordinators. All of the above mentioned professionals interact with the child on different levels. As a result, they are likely to see different signs and symptoms as listed in the previously-provided check list. Given the hectic environment of most schools, it is understandable that a teacher, for example, may see one or two warning signs displayed, yet not see the underlying problem. The existence of a school action resource team would allow the teacher to mention the possible warning signs he or she has witnessed. A school nurse, resource officer, or social worker may have additional information to

share, and a more detailed picture of the problems facing the child in question will begin to develop.

Dobkin and Nicosia (2009) identified three effective methods used to decrease drug use: enforcement, treatment, and prevention. While we certainly support these methods we believe a fourth component is needed: Broad societal education and participation. For Methcognition to become a reality, an education and training component for front line workers such as school officials and community volunteers is necessary. Social workers and law enforcement officers need to advocate for prevention efforts that can reduce the impact of the recent Meth epidemic and additional education and training is essential. While this type of training is not yet widely available, works such as the current project can fill in the gaps for school officials, and, as was mentioned previously, basic law enforcement training can be expanded and refined to include a more comprehensive examination of the Meth problem

It is recommended that either the school resource officer (in many cases a certified law enforcement officer), or the school social worker lead the teams. These individuals are most likely to have received up to date Meth training. Moreover, the authors suggest expanding or creating these teams with an increased emphasis on Methcognition. The inclusion of school nurses, for example, is critical. The action resource teams would simply discuss observations about a child in their care, and attempt to determine if a closer look is needed. The action resource team may determine that there is a need for follow up, that a potential abuse or neglect problem exists, that Meth exposure is a possible problem, or that no further action is needed.

References

Anderson, M. D. (2010). Does information matter? The effect of the project on use among youths. *Journal of Health Economics, 29,* 732-742.

Asanbee, C. B., Hall, C., & Bolden, C. D. (2008). The Meth home: Psychological impact on preschoolers in rural Tennessee. *Journal of Rural Health, 24*(3), 229-235.

Austin, A.M., & Osterling, K.L. (2006). *Substance abuse interventions for parents involved with the child welfare system: Evidence and implications*. Berkeley, CA: University of California, Berkeley

Dobkin, C., & Nicosia, N. (2009). The war on drugs: Meth, public health and crime. *American Economic Review, 99,* 324-349.

Engel, G. L. (1977). The need for a new medical model: A challenge for biomedicine. *Science 196,* 129-136.

Haight, W., Jacobsen, T., Black, J., Kingery, L., Sheridan, K., & Mulder, C. (2005). In the bleak days: Parent Meth abuse and child welfare in the Midwest. *Children and Youth Services Review, 27,* 949-971.

Halkitis, P. N. (2009). *Meth addiction: Biological foundations, psychological factors & social consequences.* Washington, DC: American Psychological Association.

Holley, M. F. (2005). *Crystal Meth: They call it ice.* Washington, OK: Tate.

Howard, J. (1994). Barriers to successful interventions. In D.J. Besharov (Ed.), *When drug addicts have children: Reorienting child welfare's response* (pp. 91-100). Washington, DC: CWLA

Kansas Meth Prevention Project. (2004). *Meth: Children at risk* [Brochure]. Kansas, MI: Author.

Kyle, A. D., & Hansell, B. (2005). *Two surveys of U.S. counties: The criminal effect of on communities. The impact of on children.* Washington, DC: National Association of Counties.

Magura, S., & Laudet, A.B. (1996). Parental substance abuse and child maltreatment: Review and implications for intervention. *Children and Youth Services Review, 18*(3), 193-220.

Manning, T. (1999). Drug labs and endangered children. *FBI Law Enforcement Bulletin,* 10-14.

Maslow, A. (1954). *Motivation and personality.* New York, NY: Harper.

Montana Department of Justice. (2009). *The economic cost of Meth use in Montana.* Retrieved from http://project.org/documents/

Montana Meth Project. (2011). *Montana project summary results.* Retrieved from http://www.montana.org

National Drug Intelligence Center. (2010). *National drug threat assessment 2010.* Retrieved from www.justice.gov/ndic/pubs38/38661/38661p.pdf

North Carolina Division of Social Services. (2008). *Drug endangered children policy.* Raleigh, NC: Author.

Reading, N. (2009). *land.* London, England: Bloomsbury Press.

Roper, J. D. (2007, March 27). Drug endangered children and the manufacture of Meth. *School Nurse News*. Retrieved from www.schoolnursenews.org

Sroufe, L. A., Dougal, S., Weinfeld, N., & Carlson, E. (2000). Relationships, development and psychopathology. In A. Sameroff, M. Lewis, & S. Miller (Eds.), *Handbook of developmental psychopathology* (2nd ed., pp. 75-92). New York, NY: Kluwer Academic.

Swetlow, K. (2003, June). Children at clandestine Meth labs: Helping 's youngest victims. *OVC Bulletin.* Washington, DC: US Department of Justice.

Weisheit, R., &White, W. L. (2009). *Meth: Its history, pharmacology and treatment.* Center City, MN: Hazelden.

Wolock, I., & Magura, S. (1996). *Parental substance abuse as a predictor of child mal-treatment re-reports. Child Abuse & Neglect, 20*(12), 1183-1193.

Zuckerman, B. (1994) Effects on parents and children. In D.J. Besharov (Ed.), When drug addicts have children: Reorienting child welfare's response. Washington, DC: CWLA.

Zernike, K. (2005, July 11). A drug scourge creates its own form of orphan. *The New York Times,* pp. 1-6.