

# Understanding the Links Between Adolescent Trauma and Substance Abuse

## A Toolkit for Providers

2nd Edition

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**From the Adolescent Trauma and Substance  
Abuse Committee of the National Child Traumatic  
Stress Network**

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Established by Congress in 2000, the National Child Traumatic Stress Network (NCTSN) is a unique collaboration of academic and community-based service centers whose mission is to raise the standard of care and increase access to services for traumatized children and their families across the United States. Combining knowledge of child development, expertise in the full range of child traumatic experiences, and attention to cultural perspectives, the NCTSN serves as a national resource for developing and disseminating evidence-based interventions, trauma-informed services, and public and professional education.

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This toolkit was developed by the Adolescent Trauma and Substance Abuse Committee of the National Child Traumatic Stress Network to raise awareness about the needs of youth with traumatic stress and substance abuse problems and to promote evidence-based practices in clinical settings. It is meant to serve as a training guide for providers working with this population.

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*When Mary was 11, her mother “left this man, Dave” to babysit. Dave gave her a joint. “It made me happy. It made me feel like nothing could touch me and everything was OK. So I started stealing my mum’s drugs.” Of course, she was caught and locked in a closet. “I was in there for almost two days. After that happened, I guess a part of me changed. I didn’t care for anybody. I hated the world after that.”<sup>1</sup>*

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Data from the most recent National Survey of Adolescents and other studies indicate that **one in four children and adolescents in the United States experiences at least one potentially traumatic event before the age of 16<sup>2</sup>**, and more than 13% of 17-year-olds—one in eight—have experienced posttraumatic stress disorder (PTSD) at some point in their lives.<sup>3</sup>

Most, if not all, of these young people also have access to a wide range of psychoactive substances that can both dull the effects of stress and place teens at increased risk of experiencing trauma. It is estimated that 29% of adolescents—nearly one in three—have experimented with illegal drugs by the time they complete 8th grade, and 41% have consumed alcohol.<sup>4</sup> For many adolescents, such early experimentation eventually progresses to abuse of—or dependence on—illicit drugs or alcohol. Every year, approximately **one in five American adolescents between the ages of 12 and 17 engages in abusive/dependent or problematic use of illicit drugs or alcohol.**<sup>5,6</sup>

Although it is unclear exactly how many adolescents who abuse drugs or alcohol also have experienced trauma, numerous studies have documented a correlation between trauma exposure and substance abuse in adolescents:

- In the National Survey of Adolescents, teens who had experienced physical or sexual abuse/assault were three times more likely to report past or current substance abuse than those without a history of trauma<sup>3</sup>
- In surveys of adolescents receiving treatment for substance abuse, more than 70% of patients had a history of trauma exposure<sup>7,8</sup>

This correlation is particularly strong for adolescents with PTSD. Studies indicate that **up to 59% of young people with PTSD subsequently develop substance abuse problems.**<sup>8-11</sup>

## Traumatic Stress and Substance Use: A Complex Relationship

Multiple pathways have been proposed to explain the temporal link between trauma and substance abuse in adolescents.<sup>12</sup> A review of these theories demonstrates that the road connecting these disorders runs both ways: trauma increases the risk of developing substance abuse, and substance abuse increases the likelihood that adolescents will experience trauma.

### **Trauma as a risk factor for substance abuse**

According to the self-medication hypothesis of substance abuse, people develop substance abuse problems in an attempt to manage distress associated with the effects of trauma exposure and traumatic stress symptoms. This theory suggests that youth turn to alcohol and other drugs to manage the intense flood of emotions and traumatic reminders associated with traumatic stress or PTSD, or to numb themselves from the experience of any intense emotion, whether positive or negative.

Several studies have found that substance use developed following trauma exposure (25%–76%) or the onset of PTSD (14%–59%) in a high proportion of teens with substance abuse disorders.<sup>8–11</sup> Recent research in this area also suggests that **traumatic stress or PTSD may make it more difficult for adolescents to stop using**, as exposure to reminders of the traumatic event have been shown to increase drug cravings in people with co-occurring trauma and substance abuse.<sup>13,14</sup> (For more information on trauma reminders, see *Understanding Traumatic Stress in Adolescents: A Primer for Substance Abuse Professionals*.)

### **Substance abuse as a risk factor for trauma**

Numerous epidemiological studies have found that, for many adolescents (45%–66%), substance use disorders precede the onset of trauma exposure.<sup>9–11</sup> Studies have shown a direct link between alcohol use and engagement in risky behaviors in which adolescents may get hurt<sup>10</sup>, such as hitchhiking, walking in unsafe neighborhoods, and driving after using alcohol or drugs.<sup>15</sup> According to the most recent National Survey on Drug Use and Health, more than 25% of underage drinkers are binge or heavy drinkers, and approximately 20%—one in five—report driving while under the influence during the past year.<sup>5</sup> Not surprisingly, adolescents with substance abuse disorders are also significantly more likely than their non-substance abusing peers to experience traumas that result from risky behaviors, including harm to themselves or witnessing harm to others.<sup>9–11</sup>

There is also evidence that **youth who are already abusing substances may be less able to cope with a traumatic event** as a result of the functional impairments associated with problematic use. In one study, investigators found that even after controlling for exposure to trauma, adolescents with substance abuse disorders were two times more likely to develop PTSD following trauma than were their non-abusing peers. The researchers suggested that the extensive psychosocial impairments found in adolescents with substance abuse

disorders occurred in part because they lacked the skills necessary to cope with trauma exposure.<sup>10</sup>

Regardless of the pathway describing the onset of trauma exposure or PTSD and the development of substance abuse problems, youth with this co-occurrence experience difficulties with emotional and behavioral regulation that make it all the more difficult for them to stop using. A successful treatment approach must therefore be flexible enough to accommodate the multiple ways in which trauma and substance abuse may be related.

### **Addressing the Needs of Adolescents with Co-occurring Trauma and Substance Abuse**

For adolescents dealing with the effects of traumatic stress or PTSD, alcohol and/or drugs initially may seem to alleviate distress, either through the increased pleasurable sensations or through the avoidance of intense emotions that may follow stressful experiences. In the long run, however, substance use perpetuates a cycle of problem behaviors that can make it more difficult to recover after a traumatic event. For teenagers struggling with substance abuse and traumatic stress, the negative effects and consequences of one disorder compound the problems of the other.

Although such teenagers need help, often desperately, they frequently have difficulty entering or staying involved in treatment services. Usually teenagers attend such facilities against their will—because they are either mandated to attend treatment (i.e., by the courts), referred by teachers, or brought in by their parents.

#### **Raphael's\* Story**

Raphael was a 15-year-old boy with a history of truancy and drug involvement (marijuana use and drug dealing). He had been placed in a group home after Child Protective Services became involved with the family and his mother and stepfather asserted that they “couldn’t control” Raphael.

In the group home, Raphael was angry, threatening, and unwilling to cooperate with group activities. He was disruptive during group therapy sessions and initially refused to say much during individual treatment sessions. Through patience, openness, and a willingness to explore Raphael’s interests—including his flair for developing spontaneous rhymes and rap-style lyrics—Raphael’s therapist was gradually able to engage Raphael in the treatment process.

Over time, Raphael opened up about his difficult relationship with his mother, being frequently hit and locked in a dark closet by his stepfather, and his conflicted relationship with his younger sister. He also talked about his frequent, almost daily, use of marijuana and alcohol and how they made him feel “better” and “on top of things.”

It became clear that, for Raphael, alcohol and marijuana served as tools that enabled him to numb overwhelming feelings and to feel dominant in uncomfortable or threatening social situations. As Raphael and his therapist began to address his trauma and substance abuse histories, Raphael started to develop better tools for coping with the intense feelings and impulses that contributed to his most pressing problems.

*\* “Raphael” is a composite representation based on real teenage clients struggling with traumatic stress and substance abuse.*

Because the service systems targeting substance abuse and mental health problems have traditionally been fragmented, few teenagers with both traumatic stress and substance abuse problems receive integrated treatment services. Compounding the problem is that there are few facilities offering integrated services, primarily because few professional training programs in substance abuse or mental health provide clinicians with the education necessary to develop expertise in both trauma and substance abuse treatment, and few professionals have training and experience across both fields.

Given the strong link between trauma and substance abuse among adolescents, however, the majority of both substance abuse and mental health professionals have encountered this population. Providing adequate and effective care to adolescents who are grappling with substance abuse and trauma will require adjustments on the part of both groups.

For mental health providers, it is critical to become familiar with the patterns of addiction associated with substances of abuse, and to recognize that similar patterns are at work in traumatic stress and addiction. Both are characterized by emotional and behavioral dysregulation, and are expressed in a range of symptoms and behaviors that can include classic posttraumatic stress symptoms, substance abuse, and other risky behaviors.

For substance abuse professionals, it is important to look beyond the immediate circumstances of the youth's substance use and pay attention to his or her trauma history and its relationship to his or her current emotional difficulties and coping patterns (including substance use). There are many commonalities between the ways in which youth respond to substance abuse triggers and the ways in which they respond to reminders of loss and trauma. Compiling a list of triggers that may lead to emotional dysregulation and substance use, and incorporating possible reminders of previous trauma and loss can be helpful.

## **Overcoming Common Challenges to Care**

Clinicians, administrators, and other healthcare providers in the substance abuse and mental health fields often face major challenges in providing care to youth with traumatic stress and substance abuse problems. For example, the fragmentation that has traditionally existed between mental health and substance abuse systems often limits the types of services that youth are eligible to receive. Additionally, service centers may lack the resources or support necessary to provide comprehensive services. Although it may not be possible to find solutions to many of these challenges, below are some solutions to common treatment problems.

CHALLENGE	SUGGESTED SOLUTION
Lack of institutional awareness and prioritization of adolescent trauma and substance use assessment and treatment	The materials in this toolkit can serve as resources to aid in raising institutional awareness of the need for sound substance abuse and trauma assessment and treatment. Presenting case material that highlights the relationships between trauma and substance abuse can also help raise institutional awareness
Clinician lack of familiarity with the common presentations of posttraumatic stress symptoms in adolescents	Use the materials in this toolkit to help become familiar with the common presentations of posttraumatic stress symptoms in adolescents. Access more information via the National Child Traumatic Stress Network website: <a href="http://www.NCTSN.org">www.NCTSN.org</a>
Time and costs associated with conducting standardized assessments and training staff to use evidence-based interventions	To convince institutional administrators to invest the time and money required for the initial stages of such program development, present them with research on improved treatment adherence and treatment outcomes when standardized assessments and evidence-based interventions are employed. Once the program has been established and youth outcomes are improved, working with youth will be more rewarding, which may encourage administrators to seek additional funding opportunities
Adolescents with severe co-occurring disorders often require assistance with other practical aspects of life—such as transportation, schooling, court advocacy, health insurance—that not all institutions are equipped to provide	Partnerships with local agencies can often go a long way towards meeting the practical needs of clients when they cannot be met by a single organization
Difficulty engaging adolescents with trauma and substance abuse histories—who often employ avoidant coping mechanisms—in treatment	Use the tips in this toolkit to help engage adolescents in treatment. For clinicians struggling to engage difficult clients: access institutional support, including additional supervision
Lack of local substance abuse and trauma training resources	Search the Internet for substance abuse and trauma training resources. To reduce the cost of face-to-face training sessions, agencies can send a single representative to be trained, who can subsequently train his/her colleagues

## Conclusion

Adequate care begins with the recognition and accurate identification of the problems these adolescents experience, whether they present to a mental health professional or to a substance abuse specialist. Rather than referring a multi-problem teenager to another provider, clinicians willing to address co-occurring disorders can develop the skills necessary to provide such adolescents with hope of recovery.

Therapists and counselors can develop skills to provide a comprehensive and integrated treatment approach. In order to maximize an adolescent's chances of success, this approach should broadly address the adolescent's concerns and take into account the functional relationship between traumatic stress and substance abuse problems. When developing an individualized treatment plan, special attention should be given to the signs and symptoms of posttraumatic stress, substance abuse, and the relationship between the two.

This toolkit has been developed to assist mental health and substance abuse professionals in providing comprehensive assessment and treatment to adolescents suffering from traumatic stress and substance abuse. It explores the complex connections between traumatic stress and substance abuse and provides guidelines for identifying, engaging, and treating adolescents suffering from these co-occurring problems.

### ***Trauma and Substance Abuse: Myths and Facts***

**MYTH:** Since most adolescents who use drugs and/or alcohol have experienced some kind of trauma, there is no need to treat trauma as a unique clinical entity.

**FACT:** Although not all youth who experience traumatic events develop PTSD, it is important to be prepared to address the multiple ways youth respond to trauma. Traumatic stress and PTSD are associated with unique (and challenging) symptoms that require targeted, trauma-informed treatment to optimize recovery. (For more information, see *Understanding Traumatic Stress in Adolescents: A Primer for Substance Abuse Professionals*.) Effective treatment approaches and interventions have already been developed for patients suffering from traumatic stress and PTSD. Making use of these techniques as part of a comprehensive treatment plan offers the greatest hope of treatment success for adolescents dealing with the effects of substance abuse and traumatic stress.

**MYTH:** When dealing with an adolescent who has a history of trauma and substance abuse, you need to treat one set of problems at a time.

**FACT:** Because the symptoms associated with traumatic stress and substance abuse are so strongly linked, the ideal treatment approach is to address both conditions. Unfortunately it is not uncommon for substance abuse programs to deny admission to patients with PTSD, and for trauma treatment programs to deny admission to patients who have not achieved sobriety. The decision about which symptoms and behaviors to address first therefore requires a careful assessment of the relative threat that each condition poses to a youth's safety, health, and immediate well-being.

## References

1. Gardner, D. (2002). Skid Row High. *The Ottawa Citizen*. April 21, 2002.
2. Costello, E. J., Erkanli, A., Fairbank, J. A., and Angold, A. (2002). The prevalence of potentially traumatic events in childhood and adolescence. *J Trauma Stress, 15*(2), 99-112.
3. Kilpatrick, D. G., Saunders, B. E., and Smith, D. W. (2003). *Youth Victimization: Prevalence and Implications*. Washington, DC: U.S. Department of Justice, Office of Justice Programs, National Institute of Justice. Retrieved April 16, 2008 from <http://www.ncjrs.gov/pdffiles1/nij/194972.pdf>.
4. Johnston, L. D., O'Malley, P. M., Bachman, J. G., and Schulenberg, J. E. (2007). *Monitoring the Future: National results on adolescent drug use: Overview of key findings, 2006*. Bethesda, MD: National Institute on Drug Abuse. Retrieved April 16, 2008 from <http://www.monitoringthefuture.org/pubs/monographs/overview2006.pdf>.
5. Substance Abuse and Mental Health Services Administration. (2007). *Results from the 2006 National Survey on Drug Use and Health: National Findings*. Rockville, MD: Department of Health and Human Services. Retrieved April 7, 2008 from <http://www.oas.samhsa.gov/nsduh/2k6nsduh/2k6Results.pdf>.
6. Knight, J. R., Harris, S. K., Sherritt, L., Van Hook, S., Lawrence, N., Brooks, T., et al. (2007). Prevalence of positive substance abuse screen results among adolescent primary care patients. *Arch Pediatr Adolesc Med, 161*(11), 1035-41.
7. Funk, R. R., McDermeit, M., Godley, S. H., and Adams, L. (2003). Maltreatment issues by level of adolescent substance abuse treatment: The extent of the problem at intake and relationship to early outcomes. *Child Maltreat, 8*(1), 36-45.
8. Deykin, E. Y., and Buka, S. L. (1997). Prevalence and risk factors for posttraumatic stress disorder among chemically dependent adolescents. *Am J Psychiatry, 154*(6), 752-7.
9. Clark, D. B., Lesnick, L., and Hegedus, A. M. (1997). Traumas and other adverse life events in adolescents with alcohol abuse and dependence. *J Am Acad Child Adolesc Psychiatry, 36*(12), 1744-51.
10. Giaconia, R. M., Reinherz, H. Z., Hauf, A. C., Paradis, A. D., Wasserman, M.S., and Langhammer, D. M. (2000). Comorbidity of substance use and post-traumatic stress disorders in a community sample of adolescents. *Am J Orthopsychiatry, 70*(2), 253-62.
11. Perkonig, A., Kessler, R. C., Storz, S., and Wittchen, H. U. (2000). Traumatic events and post-traumatic stress disorder in the community: Prevalence, risk factors and comorbidity. *Acta Psychiatr Scand, 101*(1), 46-59.
12. Giaconia, R. M., Reinherz, H. Z., Paradis, A. D., and Stashwick, C. K. (2003). Comorbidity of substance use disorders and posttraumatic stress disorder in adolescents. In Oimette, P. and Brown, P. J. (Eds.), *Trauma and substance abuse: Causes, consequences, and treatment of comorbid disorders* (pp. 227-242). Washington, DC: American Psychological Association.

13. Saladin, M. E., Drobles, D. J., Coffey, S. F., Dansky, B. S., Brady, K. T., and Kilpatrick, D. G. (2003). PTSD symptom severity as a predictor of cue-elicited drug craving in victims of violent crime. *Addict Behav*, 28(9), 1611-29.
14. Coffey, S. F., Saladin, M. E., Drobles, D. J., Brady, K. T., Dansky, B. S., and Kilpatrick, D. G. (2002). Trauma and substance cue reactivity in individuals with comorbid posttraumatic stress disorder and cocaine or alcohol dependence. *Drug Alcohol Depend*, 65(2), 115-27.
15. Kann, L., Kinchen, S. A., Williams, B. I., Ross, J. G., Lowry, R., Grunbaum, J.A., et al. (2000). Youth risk behavior surveillance—United States, 1999. *MMWR CDC Surveill Summ*, 49(5), 1-96.

*He that conceals his grief finds no remedy for it.*  
Turkish proverb

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The term “traumatic stress” generally refers to the physical and emotional response of an individual to events that threaten the life or physical/psychological integrity of that person or of someone critically important to him or her. **Traumatic stress characteristically produces intense physical and emotional reactions, including an overwhelming sense of terror, helplessness, and horror,** and a range of physical sensations such as a pounding heart, trembling, dizziness, nausea, dry mouth and throat, and loss of bladder or bowel control.

In children and adolescents, traumatic stress can be triggered by a wide range of experiences, including:

- Physical, sexual, or emotional abuse<sup>1</sup>
- Neglect (failure to provide for a child’s basic physical, medical, educational, and emotional needs)
- Interpersonal violence or victimization (e.g., assault, rape)<sup>2</sup>
- Community violence (e.g., gang violence, riots, school shootings)<sup>3-6</sup>
- Natural disasters (e.g., hurricanes, floods, tornadoes)<sup>7,8</sup>
- Terrorism<sup>9,10</sup>
- Traumatic loss or grief (e.g., murder of a parent or sibling, death of a parent in battle)<sup>9,11-15</sup>
- Medical trauma (e.g., severe injury, life-threatening illness)<sup>16-18</sup>
- Accidents<sup>16</sup>

The short- and long-term impact of any given traumatic event depends partly on the objective nature of the event, and partly on the individual’s subjective response to it. For example, the traumatic impact of interpersonal events such as physical or sexual abuse or victimization may vary depending on factors such as the identity of the perpetrator, the frequency of the abuse, and whether force was used. Not every distressing event results in traumatic stress, and something that is traumatic for one person may not be traumatic for another.

## Types of Traumatic Stress

A single, time-limited traumatic event is called an *acute trauma*. A natural disaster, motor vehicle accident, physical or sexual assault, or a school shooting are all examples of acute traumas. Over the course of even a brief event, a child or adolescent may go through a variety of complicated sensations, thoughts, feelings, and physical responses that are frightening in and of themselves and contribute to his or her sense of being overwhelmed.

The loss of someone critically important (e.g. a parent, sibling, or close friend) is an acute event that can lead to a traumatic stress reaction known as *traumatic grief*. Although all adolescents grieve after the death of a loved one, traumatic grief occurs when the teen experiences the death/loss as a traumatic event and experiences many of the symptoms of PTSD (e.g., intrusive thoughts about the death, increased physical agitation, emotional numbing).<sup>13-15</sup> These symptoms hinder the natural bereavement process, can cause interference in daily functioning, and do not allow the teen to process and, eventually, let go of the loss.<sup>13-15</sup> Traumatic grief is often complicated by the secondary consequences of the loss, such as moving in with grandparents after the loss of a parent.<sup>14</sup>

The experience of multiple traumatic events is referred to as *chronic trauma*. Chronic trauma may encompass several different events—such as exposure to domestic violence, involvement in a serious car accident, and exposure to gang-related violence—or longstanding trauma such as physical abuse or war. One common form of chronic trauma is child neglect.

**The effects of chronic trauma tend to be cumulative, because each event serves as a reminder of the prior trauma and reinforces its negative impact.** A child or adolescent who has been exposed to a series of traumas may become increasingly overwhelmed with each subsequent event and more convinced that the world is not a safe place. Over time, he or she may also become less able to tolerate ordinary everyday stress.

### **A Word about Trauma Reminders**

Trauma reminders are people, situations, places, or things that evoke past traumatic events. When faced with trauma reminders, adolescents may reexperience the intense and disturbing feelings tied to the original event. Sometimes adolescents are aware of their reaction and its connection to the original event. More often, however, they are unaware of the root cause of their feelings, and may even feel frightened by the intensity of their reaction. As a result, traumatized teens may:

- Respond recklessly, taking more risks or abusing drugs or alcohol
- Withdraw from activities, places and friends in an effort to avoid reminders
- Fear that their strong reactions mean they are “going crazy”
- Feel stigmatized by having gone through traumatic events, and feel that they cannot talk about them

*Complex trauma* is a term used by some experts to describe both *exposure* to chronic trauma—usually caused by adults entrusted with the child’s care, such as parents or caregivers—and the *impact* of such exposure on the person.<sup>19</sup> Children and adolescents who have experienced complex trauma have endured multiple traumatic events (such as physical or sexual abuse, profound neglect, or community violence) from a very young age (typically younger than age 5).

When trauma is associated with the failure of those who should be caring for a child, it has profound effects on nearly every aspect of the child’s development and functioning. Children and adolescents who have experienced complex trauma often display a range of social, developmental, and physical impairments, including:

- Social isolation and difficulty relating to and empathizing with others
- Unexplained physical symptoms and increased medical problems (e.g., asthma, skin problems, and autoimmune disorders)
- Difficulty in regulating emotion and knowing and describing their feelings and internal states
- Poor impulse control, self-destructive behavior, and aggression
- Sleep disturbances
- Disturbed body image
- Low self-esteem, shame, and guilt

In some cases, traumatic stress reaches the level of clinically defined posttraumatic stress disorder (PTSD). According to the American Psychiatric Association, PTSD is characterized by episodes of *reexperiencing* the trauma (e.g., flashbacks, or intrusive thoughts), *avoidance* of situations that are reminiscent of the trauma, *emotional numbing*, and *increased arousal* (e.g., hypervigilance, irritability).<sup>20</sup> Numerous surveys have shown that children and adolescents who have experienced trauma are at particularly high risk of developing PTSD: **more than 75% of children who experience a school shooting, and approximately 90% of children who are sexually abused develop PTSD.**<sup>21</sup> They may report ongoing fear that the event will occur again, persistent flashbacks and nightmares, avoidance of things that remind them of the event, being on edge all the time, and/or trouble sleeping.

## The Prevalence of Trauma among Adolescents

Children and adolescents in the United States are routinely exposed to a wide range of potentially traumatic events. According to the National Survey of Adolescents (NSA):<sup>2</sup>

- Four out of 10 adolescents have witnessed violence
- Seventeen percent have been physically assaulted
- Eight percent have experienced sexual assault

The prevalence of trauma exposure is even higher among certain high-risk groups. For example, data gathered by the National Child Abuse and Neglect Data System has shown that Native American, Alaskan Native, African American, and mixed-race children have much higher rates of maltreatment (including neglect) as compared to their white (Hispanic or non-Hispanic) peers.<sup>22</sup> The NSA found that **more than half of African American, Hispanic, and Native American adolescents have witnessed violence in their lifetimes.**<sup>2</sup> Other groups that are more likely to have experienced various forms of trauma include:

- Homeless youth<sup>23,24</sup>
- Youth whose parents have a criminal record or history of mental illness<sup>25</sup>, or whose older siblings are involved in “deviant behaviors” such as aggression, crime, or drug abuse<sup>26</sup>
- Urban youth who have a high percentage of unmonitored and unstructured time, particularly time spent in the company of friends<sup>27</sup>
- Lesbian, gay, bisexual, and transgender youth<sup>28</sup>
- Refugee children and adolescents<sup>29-32</sup>, particularly those not accompanied by a caregiver adult<sup>33,34</sup>

Of course, many adolescents fit into more than one of the above categories, which places them at even greater risk.

## **The Impact of Trauma on Adolescent Development and Behavior**

Trauma has been shown to adversely affect many of the neurobiological systems responsible for cognitive development and the regulation of emotions and behavior.<sup>35-37</sup> In adolescents, this can mean delays in the developmental processes that would normally enable them to better consider the consequences of their behavior, to make more realistic appraisals of danger and safety, to moderate daily behavior to meet long-term goals, and to make increased use of abstract thinking for academic learning and problem-solving. As a result, adolescents suffering from traumatic stress or PTSD are prone to:

- Reckless and risk-taking behavior
- “Living for today and not tomorrow”

- Underachievement and school failure
- Making bad choices

In addition to the neurobiological impact of traumatic stress, **adolescents who have been exposed to trauma expend an enormous amount of emotional and mental energy responding to, coping with, and trying to coming to terms with the event** or events. This can reduce their capacity to master other age-appropriate developmental tasks. For example:

- A youth whose mind is occupied with intrusive images of traumatic events cannot focus on learning, and so lags behind in school
- A teen who is emotionally overwhelmed by reminders of traumatic events cannot devote his or her energies to forming relationships with peers
- A teen who is fearful of taking any risk cannot take on the challenges that lead to growth

The longer traumatic stress goes untreated, the greater the risk of developing maladaptive and potential dangerous coping mechanisms.

## Implications for Substance Abuse Treatment

Adolescents turn to a number of potentially destructive behaviors in an effort to avoid or defuse the intense negative emotions that accompany traumatic stress, including compulsive sexual behavior, self-mutilation, bingeing and purging, and even attempted suicide. But arguably the most common maladaptive coping mechanism among traumatized adolescents is the abuse of alcohol or drugs.

Reported rates of substance abuse following trauma exposure range from 25% to 76%<sup>8-11</sup>, and research has shown that more than half of young people with PTSD subsequently develop substance abuse problems.<sup>8-11</sup> A history of childhood sexual physical abuse has also been associated with the development and severity of alcohol disorders.<sup>38</sup>

**The presence of traumatic stress or PTSD greatly complicates the recovery process in adolescents with substance abuse disorders.** In addition to the physically and psychologically addicting effects of alcohol and drugs, adolescents with co-occurring traumatic stress must deal with the sometimes overwhelming sequelae of their past traumas. For example, exposure to trauma reminders has been shown to increase drug cravings in people with co-occurring trauma and substance abuse.<sup>39,40</sup>

Available evidence indicates that when substance abuse and traumatic stress are treated separately, adolescents with co-occurring disorders are more likely to relapse and revert to previous maladaptive coping strategies:

- In surveys of adolescents receiving substance abuse treatment, a history of victimization has consistently been associated with negative treatment outcomes<sup>41,42</sup>
- Teens with a history of physical abuse are less likely to achieve posttreatment abstinence than teens without a trauma history<sup>43</sup>
- Higher initial symptom severity among youth with co-occurring traumatic stress and substance abuse problems has been associated with more internal distress and violent behavior posttreatment<sup>42</sup>

Research in adults with co-occurring trauma and substance abuse supports the same conclusion. In studies of adults receiving substance abuse treatment, individuals with co-occurring PTSD and substance abuse had higher relapse

### **Tony's Story\***

Tony is a 17-year-old who lives at home with his mother and stepfather, who frequently argue, and his 14-year-old brother, Mikey. When Tony was 15, he saw his best friend, Curtis, shot in the cross-fire of gang-related violence in their neighborhood. After Curtis was attended to by the paramedics, Tony was allowed to ride in the ambulance to the hospital with Curtis. Curtis died in the ICU several hours later.

Tony was devastated, but believed that Curtis would have wanted him to stay strong; he tried to get back to his daily routine as quickly as possible. Before Curtis's death, Tony was doing pretty well in his classes and was on the school basketball team. However, he began to find it harder to focus in school and was having recurrent nightmares about Curtis's death that were making it difficult for him to sleep.

At a basketball party one weekend, a teammate offered Tony some Vicodin for a game-related injury. Tony took a couple of extra pills to help him fall asleep. On the way home from the party, he noticed that he no longer had the on-edge feeling he usually had when walking through his neighborhood. During the next week he discovered that Vicodin made it easier for him to deal with his brother when he was getting on his nerves. When he ran out of Vicodin, Tony checked around for another source and found a teammate who knew someone who was selling painkillers. Soon Tony started using these every day, sometimes skipping school when he'd sleep through his alarm. When his dealer offered him OxyContin, Tony switched and liked the stronger effect, but soon discovered that it cost a lot more money, so he started stealing from his parents. When the original amounts did not cause the same effect, he started crushing and snorting the pills for an even stronger effect, and he eventually tried injecting morphine.

Tony was placed on probation for missing so much school, and eventually the courts ordered drug counseling services. He went to an inpatient program for one month and then transitioned to a partial-day program. After being off drugs for some time, he started thinking more about his friend's horrific death and began to experience survivor guilt. His nightmares and hyperarousal returned and felt so unbearable that he soon began using again to gain temporary relief.

*\*"Tony" is a composite representation based on real teenage clients struggling with traumatic stress and substance abuse.*

rates than those with substance abuse problems alone<sup>44</sup>, and initial PTSD severity was a significant predictor of relapse.<sup>45,46</sup> Among adults with cocaine or alcohol dependence, patients with a history of PTSD were more likely to use following negative experiences (e.g., unpleasant emotions and/or physical discomfort) than those without PTSD.<sup>47</sup>

## Conclusions

Although the importance of addressing co-occurring substance abuse and traumatic stress is evident, ways of integrating these services are not as clear-cut. For example, some providers may feel that before being able to address underlying issues relating to trauma, it is important to treat substance abuse symptoms and limit the potential harm and threat to the individual. Conversely, some providers may feel that unless the individual learns strategies to manage distress associated with trauma, the likelihood of substance abuse relapse remains high.

Despite these challenges, better care can be achieved through increased communication and coordination among substance abuse professionals and mental health providers, and increased awareness of the links between adolescent traumatic stress and substance abuse. Substance abuse professionals need to remain aware of these links, and make trauma assessment an integral part of the services provided by agencies and individuals working with adolescents, particularly those at high risk of trauma exposure.

### ***Trauma and Substance Abuse: Myths and Facts***

**MYTH:** Attributing drug or alcohol use to stress just prevents adolescents from taking responsibility for their actions.

**FACT:** Defining the relationship between a youth's trauma history and his or her substance use can actually enhance his or her ability to take responsibility for his or her actions, particularly in adolescents who are reluctant to acknowledge that their substance use is a problem. In addition, the self-medication hypothesis can be extremely helpful in understanding both the origins of a youth's substance abuse and the factors that may lead to continued use or relapse.

## References

1. Porter, C., Lawson, J. S., and Bigler, E. D. (2005). Neurobehavioral sequelae of child sexual abuse. *Child Neuropsychol*, *11*(2), 203–20.
2. Kilpatrick, D. G., Saunders, B. E., and Smith, D. W. (2003). *Youth victimization: Prevalence and Implications*. Washington, DC: U.S. Department of Justice, Office of Justice Programs, National Institute of Justice. Retrieved April 16, 2008 from <http://www.ncjrs.gov/pdffiles1/nij/194972.pdf>.
3. Ozer, E. J., and Weinstein, R. S. (2004). Urban adolescents' exposure to community violence: The role of support, school safety, and social constraints in a school-based sample of boys and girls. *J Clin Child Adolesc Psychol*, *33*(3), 463–76.
4. Ozer, E. J., and McDonald, K. L. (2006). Exposure to violence and mental health among Chinese American urban adolescents. *J Adolesc Health*, *39*(1), 73–9.
5. Paxton, K. C., Robinson, W. L., Shah, S., and Schoeny, M. E. (2004). Psychological distress for African-American adolescent males: Exposure to community violence and social support as factors. *Child Psychiatry Hum Dev*, *34*(4), 281–95.
6. Fitzpatrick, K. M., Piko, B. F., Wright, D.R., and LaGory, M. (2005). Depressive symptomatology, exposure to violence, and the role of social capital among African American adolescents. *Am J Orthopsychiatry*, *75*(2), 262–74.
7. Galea, S., Brewin, C. R., Gruber, M., Jones, R. T., King, D. W., King, L. A., et al. (2007). Exposure to hurricane-related stressors and mental illness after Hurricane Katrina. *Arch Gen Psychiatry*, *64*(12), 1427–34.
8. Goenjian, A. K., Walling, D., Steinberg, A. M., Karayan, I., Najarian, L. M., and Pynoos, R. (2005). A prospective study of posttraumatic stress and depressive reactions among treated and untreated adolescents 5 years after a catastrophic disaster. *Am J Psychiatry*, *162*(12), 2302–8.
9. Brown, E. J., and Goodman, R. F. (2005). Childhood traumatic grief: An exploration of the construct in children bereaved on September 11. *J Clin Child Adolesc Psychol*, *34*(2), 248–59.
10. Calderoni, M. E., Alderman, E. M., Silver, E. J., and Bauman, L. J. (2006). The mental health impact of 9/11 on inner-city high school students 20 miles north of Ground Zero. *J Adolesc Health*, *39*(1), 57–65.
11. Dyregrov, K., and Dyregrov, A. (2005). Siblings after suicide—"the forgotten bereaved". *Suicide Life Threat Behav*, *35*(6), 714–24.
12. Cohen, J. A., Mannarino, A. P., and Staron, V. R. (2006). A pilot study of modified cognitive-behavioral therapy for childhood traumatic grief (CBT-CTG). *J Am Acad Child Adolesc Psychiatry*, *45*(12), 1465–73.
13. Cohen, J. A., Mannarino, A. P., and Knudsen, K. (2004). Treating childhood traumatic grief: A pilot study. *J Am Acad Child Adolesc Psychiatry*, *43*(10), 1225–33.

14. Cohen, J. A., and Mannarino, A. P. (2004). Treatment of childhood traumatic grief. *J Clin Child Adolesc Psychol*, 33(4), 819–31.
15. Cohen, J., Goodman, R. F., Brown, E. J., and Mannarino, A. (2004). Treatment of childhood traumatic grief: Contributing to a newly emerging condition in the wake of community trauma. *Harv Rev Psychiatry*, 12(4), 213–6.
16. Winston, F. K., Kassam-Adams, N., Garcia-Espana, F., Ittenbach, R., and Cnaan, A. (2003). Screening for risk of persistent posttraumatic stress in injured children and their parents. *JAMA*, 290(5), 643–9.
17. Taieb, O., Moro, M. R., Baubet, T., Revah-Levy, A., and Flament, M. F. (2003). Posttraumatic stress symptoms after childhood cancer. *Eur Child Adolesc Psychiatry*, 12(6), 255–64.
18. El hamaoui, Y., Yaalaoui, S., Chihabeddine, K., Boukind, E., and Moussaoui, D. (2002). Post-traumatic stress disorder in burned patients. *Burns*, 28(7), 647–50.
19. Cook, A., Spinazzola, J., Ford, J., Lanktree, C., Blaustein, M., Cloitre, M., et al. (2005). Complex trauma in children and adolescents. *Psychiatric Annals*, 35(5), 390–398.
20. American Psychiatric Association. (2000). *Diagnostic and Statistical Manual of Mental Disorders, DSM-IV-TR (Text Revision)* (4th ed.). Washington, DC: American Psychiatric Publishing, Inc.
21. Hamblen, J. (1999). *National Center for PTSD FactSheet: PTSD in Children and Adolescents*. White River Junction, VT: National Center for PTSD. Retrieved April 10, 2008, from [http://www.ncptsd.va.gov/ncmain/ncdocs/fact\\_shts/fs\\_children.html](http://www.ncptsd.va.gov/ncmain/ncdocs/fact_shts/fs_children.html)
22. U.S. Department of Health and Human Services. (2008). *Child Maltreatment 2006*. Washington, DC: U.S. Government Printing Office. Retrieved April 15, 2008 from <http://www.acf.hhs.gov/programs/cb/pubs/cm06/cm06.pdf>.
23. Kipke, M. D., Simon, T. R., Montgomery, S. B., Unger, J. B., and Iversen, E. F. (1997). Homeless youth and their exposure to and involvement in violence while living on the streets. *J Adolesc Health*, 20(5), 360–7.
24. Gwadz, M. V., Nish, D., Leonard, N. R., and Strauss, S. M. (2007). Gender differences in traumatic events and rates of post-traumatic stress disorder among homeless youth. *J Adolesc*, 30(1), 117–29.
25. Costello, E. J., Erkanli, A., Fairbank, J. A., and Angold, A. (2002). The prevalence of potentially traumatic events in childhood and adolescence. *J Trauma Stress*, 15(2), 99–112.
26. Snyder, J., Bank, L., and Burraston, B. (2005). The consequences of antisocial behavior in older male siblings for younger brothers and sisters. *J Fam Psychol*, 19(4), 643–53.
27. Richards, M. H., Larson, R., Miller, B. V., Luo, Z., Sims, B., Parrella, D. P., et al. (2004). Risky and protective contexts and exposure to violence in urban African American young adolescents. *J Clin Child Adolesc Psychol*, 33(1), 138–48.

28. Kosciw, J. G., and Diaz, E. M. (2006). *The 2005 National School Climate Survey: The experiences of lesbian, gay, bisexual and transgender youth in our nation's schools*. New York, NY: Gay, Lesbian and Straight Education Network (GLSEN). Retrieved April 16, 2008 from [http://www.glsen.org/binary-data/GLSEN\\_ATTACHMENTS/file/585-1.pdf](http://www.glsen.org/binary-data/GLSEN_ATTACHMENTS/file/585-1.pdf).
29. Hooberman, J. B., Rosenfeld, B., Lhewa, D., Rasmussen, A., and Keller, A. (2007). Classifying the torture experiences of refugees living in the United States. *J Interpers Violence, 22*(1), 108–23.
30. Ellis, B. H., Lhewa, D., Charney, M., and Cabral, H. (2006). Screening for PTSD among Somali adolescent refugees: Psychometric properties of the UCLA PTSD Index. *J Trauma Stress, 19*(4), 547–51.
31. Keller, A., Lhewa, D., Rosenfeld, B., Sachs, E., Aladjem, A., Cohen, I., et al. (2006). Traumatic experiences and psychological distress in an urban refugee population seeking treatment services. *J Nerv Ment Dis, 194*(3), 188–94.
32. Thabet, A. A., Abed, Y., and Vostanis, P. (2004). Comorbidity of PTSD and depression among refugee children during war conflict. *J Child Psychol Psychiatry, 45*(3), 533–42.
33. Bean, T. M., Eurelings-Bontekoe, E., and Spinhoven, P. (2007). Course and predictors of mental health of unaccompanied refugee minors in the Netherlands: One year follow-up. *Soc Sci Med, 64*(6), 1204–15.
34. Bean, T., Derluyn, I., Eurelings-Bontekoe, E., Broekaert, E., and Spinhoven, P. (2007). Comparing psychological distress, traumatic stress reactions, and experiences of unaccompanied refugee minors with experiences of adolescents accompanied by parents. *J Nerv Ment Dis, 195*(4), 288–97.
35. De Bellis, M. D. (2001). Developmental traumatology: the psychobiological development of maltreated children and its implications for research, treatment, and policy. *Dev Psychopathol, 13*(3), 539–64.
36. De Bellis, M. D., and Keshavan, M. S. (2003). Sex differences in brain maturation in maltreatment-related pediatric posttraumatic stress disorder. *Neurosci Biobehav Rev, 27*(1–2), 103–17.
37. De Bellis, M. D., Keshavan, M. S., Clark, D. B., Casey, B. J., Giedd, J. N., Boring, A. M., et al. (1999). A.E. Bennett Research Award. Developmental traumatology. Part II: Brain development. *Biol Psychiatry, 45*(10), 1271–84.
38. Zlotnick, C., Johnson, D. M., Stout, R. L., Zywiak, W. H., Johnson, J. E., and Schneider, R. J. (2006). Childhood abuse and intake severity in alcohol disorder patients. *J Trauma Stress, 19*(6), 949–59.
39. Saladin, M. E., Drobles, D. J., Coffey, S. F., Dansky, B. S., Brady, K. T., and Kilpatrick, D. G. (2003). PTSD symptom severity as a predictor of cue-elicited drug craving in victims of violent crime. *Addict Behav, 28*(9), 1611–29.

40. Coffey, S. F., Saladin, M. E., Drobles, D. J., Brady, K. T., Dansky, B. S., and Kilpatrick, D. G. (2002). Trauma and substance cue reactivity in individuals with comorbid posttraumatic stress disorder and cocaine or alcohol dependence. *Drug Alcohol Depend*, 65(2), 115–27.
41. Funk, R. R., McDermeit, M., Godley, S. H., and Adams, L. (2003). Maltreatment issues by level of adolescent substance abuse treatment: The extent of the problem at intake and relationship to early outcomes. *Child Maltreat*, 8(1), 36–45.
42. Titus, J. C., Dennis, M. L., White, W. L., Scott, C. K., and Funk, R. R. (2003). Gender differences in victimization severity and outcomes among adolescents treated for substance abuse. *Child Maltreat*, 8(1), 19–35.
43. Grella, C. E., and Joshi, V. (2003). Treatment processes and outcomes among adolescents with a history of abuse who are in drug treatment. *Child Maltreat*, 8(1), 7–18.
44. Read, J. P., Brown, P. J., and Kahler, C. W. (2004). Substance use and posttraumatic stress disorders: Symptom interplay and effects on outcome. *Addict Behav*, 29(8), 1665–72.
45. Brown, P. J. (2000). Outcome in female patients with both substance use and post-traumatic stress disorders. *Alcoholism Treatment Quarterly*, 13(3), 127–135.
46. Ouimette, P. C., Brown, P. J., and Najavits, L. M. (1998). Course and treatment of patients with both substance use and posttraumatic stress disorders. *Addict Behav*, 23(6), 785–95.
47. Waldrop, A. E., Back, S. E., Verduin, M. L., and Brady, K. T. (2007). Triggers for cocaine and alcohol use in the presence and absence of posttraumatic stress disorder. *Addict Behav*, 32(3), 634–9.



*“Mental health programs designed to reduce common psychological problems associated with child and adolescent victimization are common, but few include specific interventions delaying the onset of substance use and reducing substance abuse. . .”<sup>1</sup>*

Dean Kilpatrick, Benjamin Saunders & Daniel Smith  
*Youth Victimization: Prevalence and Implications*

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On any given day, approximately 8% of American adolescents between the ages of 12 and 17 meet the American Psychiatric Association’s diagnostic criteria for substance abuse or dependence<sup>2</sup>, more than 5% meet the criteria for alcohol abuse or dependence<sup>2</sup>, and more than 11% show signs of “problematic use” of alcohol or drugs, defined as more than one substance-related problem during the past year.<sup>3</sup> Taken together, these data indicate that **one in five American adolescents is engaged in maladaptive or dangerous use of alcohol or drugs.**<sup>2,3</sup>

Numerous studies have documented a strong correlation between trauma exposure and substance abuse in young people. The most recent National Survey of Adolescents revealed that teens who had experienced physical or sexual abuse/assault were three times more likely to report past or current substance abuse than those without a history of trauma<sup>1</sup>, and surveys of adolescents receiving treatment for substance abuse have shown that more than 70% had a history of trauma exposure.<sup>4,5</sup> The link between trauma and substance abuse is even more striking among adolescents with PTSD: studies indicate that up to 59% of young people with PTSD subsequently develop substance abuse problems.<sup>5-8</sup>

Although recreational alcohol and drug use are more common in adults, studies have shown that **youth who engage in drug and alcohol use are at greater risk for lifelong negative consequences, especially when they start using at a young age.** Because the teenage brain is still growing and changing, alcohol and drug use at an early age have a greater potential to disrupt normal brain development. The most affected brain regions include the hippocampus—which is related to learning and memory—and the prefrontal cortex, which is responsible for critical thinking, planning, impulse control, and emotional regulation.<sup>9,10</sup> Drug and alcohol use also interfere with many other physiological processes and have been shown to destabilize mood. Thus, adolescent substance use is associated with higher rates of depression, aggression, violence and suicide.<sup>11</sup> These findings are particularly disturbing given that, for most teens, initiation of substance use tends to be at an early age. One

national survey found that **by the time they finish 8th grade, nearly one in three (29%) adolescents has experimented with illegal drugs, and 41% have consumed alcohol.**<sup>12</sup>

The earlier onset the age of first drinking, the greater the risk for lifetime alcohol abuse or dependence.<sup>13</sup>

Given these findings, it is clear that substance abuse screening should be an integral part of the services provided by agencies and individuals working with adolescents. This is particularly important in mental health service systems, where adolescents in treatment for traumatic stress and other emotional problems could benefit greatly from receiving care from clinical staff that understands the strong functional relationship between substance abuse and traumatic stress.

### **Substance Abuse and Trauma: Making the Connection**

Many researchers and providers point to the self-medication hypothesis to explain the connection between trauma exposure and substance abuse, suggesting that youth turn to psychoactive drugs and alcohol in an attempt to cope with traumatic stress or reminders of loss. Although there is much evidence to support this pathway— studies evaluating the frequency of substance abuse following trauma exposure have reported rates as high as 76%<sup>8-11</sup>—it is also true that substance abuse can increase an adolescent's risk of trauma exposure and of experiencing traumatic stress symptoms.

Epidemiological studies have found that for many adolescents (up to 66% in some studies) substance use disorders precede the onset of trauma exposure.<sup>6,7</sup> This may be due to the fact that substance abusing adolescents are more likely to engage in risky activities that could lead to harm to themselves or others.<sup>6-8</sup> For example, teens with substance abuse disorders are more likely to drive while under the influence, hitchhike, or walk in unsafe neighborhoods.<sup>2,14</sup> There is also evidence that substance use disorders decrease youths' ability to appropriately cope with new distressing and traumatic events, thus leading to the increased likelihood of developing PTSD. In one study, adolescents with substance abuse disorders were two times more likely to develop PTSD following trauma than were their non-substance abusing peers.<sup>7</sup>

Whatever the temporal relationship between trauma and the development of substance abuse, **it is clear that the negative effects and consequences of one disorder compound the problems of the other.** All individuals with substance abuse disorders are at risk of experiencing intense cravings for their substance(s) of abuse when exposed to stimuli associated with use (e.g., substance-using peers, places where they obtain drugs, time of day). In substance abusing teens with a history of trauma, such cravings can also be triggered by people, situations, places, or things that evoke past traumatic events. Research

with substance abusing adults has shown that craving increases when individuals with co-occurring trauma and substance abuse are exposed to cues of the traumatic event.<sup>15,16</sup> Among adults with cocaine dependence, for example, individuals with PTSD are more likely to use following negative experiences (such as unpleasant emotions and physical discomfort) when compared with those without PTSD.<sup>17</sup>

### **Successful treatment of adolescents with co-occurring traumatic stress and substance abuse therefore requires interventions that address the challenges of both disorders.**

Failure to provide such comprehensive treatment may significantly impair these teens' likelihood of long-term recovery. In the absence of coping strategies to manage distress associated with trauma, adolescents with co-occurring disorders are more likely to relapse and revert to maladaptive coping strategies than teens with substance abuse alone:

- In surveys of adolescents receiving substance abuse treatment, a history of victimization has consistently been associated with negative treatment outcomes<sup>4,18</sup>
- Teens with a history of physical abuse are less likely to achieve posttreatment abstinence than teens without a trauma history<sup>19</sup>
- Higher initial symptom severity among youth with co-occurring traumatic stress and substance abuse problems has been associated with more internal distress and violent behavior posttreatment<sup>18</sup>

Research in adults with co-occurring trauma and substance abuse supports the same conclusion. In studies of adults receiving substance abuse treatment, individuals with co-occurring PTSD and substance abuse had higher relapse rates than those with substance abuse problems alone<sup>20</sup>, and initial PTSD severity was a significant predictor of relapse.<sup>21,22</sup>

These findings illustrate the need for increased awareness among mental health professionals of the strong and complex relationship between substance abuse and traumatic stress. Teens battling the effects of traumatic stress and substance abuse need to acquire coping skills to manage the distress associated with either type of problem. Improvements in the ability to manage substance abuse cravings, for example, may enhance the youth's readiness to learn how to manage trauma and loss reminders.

### **Why Do Adolescents Use?**

Understanding the reasons youth start using drugs or alcohol—as well as their reasons for continuing or discontinuing use—is crucial to developing effective substance abuse interventions. A recent 30-month study of 923 teenagers receiving outpatient and residential substance abuse treatment has provided some insight into the motivations behind adolescents' substance abuse and eventual recovery.<sup>23</sup>

In this study, three quarters of the teens cited social pressures and experimentation as their reasons for initiating drug or alcohol use.

Teens may use because they see “everyone else” doing it and want to blend in, because it’s a way of spending time with friends, of being accepted, of becoming popular, of enhancing social and other activities, or because they fear that if they refuse, they might alienate potential friends. Many

adolescents reported that curiosity led to first use, while others reported that they decided to start after witnessing use by a parent or relative. Of note, only 7% reported initiating use to “cope with difficulties.”<sup>23</sup>

“If I don’t do drugs, I feel like I’m going to go insane. Because I have all these thoughts and all this pain in my heart and I can’t get rid of it, you know? Drugs is the only thing that takes that away. That’s why I do drugs. Because it keeps me, not happy, but it keeps me from being so sad that I want to die.”<sup>24</sup>

This situation changes when it comes to teens’ reasons for continuing use. When asked why they continue to use, more than half reported using drugs because it feels good (29%) or because it helps them cope with difficulties (23%). Another 7% reported that it was an addiction or “habit,” and 4% felt that drug or alcohol use enhanced their sense of self in some way (greater confidence, self esteem, etc.).<sup>23</sup> In light of these findings, it is likely that, for teens experiencing traumatic stress, continued substance use may serve as a coping strategy to deal with stress, forget unpleasant experiences, avoid negative emotions, do away with worries, or feel numb or indifferent to the challenges of daily life or the reminders of past trauma.

Among teens who quit using drugs or alcohol, the most frequently reported reasons—accounting for 57% of responses—had to do with the negative effect that using had or could have on the adolescents’ lives. Some respondents said they had tired of using (22%), others were concerned about the effect drug use could have on their overall life path (21%), and others were worried about the negative physical and psychological effects of their drug or alcohol use (14%). By comparison, external pressures accounted for less than one quarter of teens’ reasons for quitting: 14% of respondents indicated they had quit in response to external factors such as jail or mandated treatment, 4% reported quitting for family and friends, and 3% reported quitting to avoid trouble.<sup>23</sup>

## Recognizing Substance Abuse and Dependence in Adolescents

Although the reasons for initiating and continuing drug and alcohol use are varied, the signs of abuse and dependence are remarkably consistent. According to the American Psychiatric Association<sup>25</sup>, *substance abuse* is a pattern of use that leads to significant impairment or distress, manifested as one or more of the following occurring during a 12-month period:

- Recurrent use resulting in a failure to fulfill major obligations at work, school, or home
- Recurrent use in situations in which it is physically hazardous (e.g., driving while high or drunk)
- Recurrent substance-related legal problems
- Continued use despite persistent or recurrent social or interpersonal problems caused or exacerbated by the effects of the substance (e.g., arguments with parents, fights)

*Substance dependence* (more commonly referred to as addiction) involves the same problems, with the addition of clear signs of physical and psychological dependence, as manifested by three or more of the following occurring at any time over a 12-month period:<sup>25</sup>

- **Tolerance**, defined as the need for increased amounts of the substance to achieve the desired effect, or markedly diminished effects with continued use of the same amount of the substance
- **Withdrawal**, manifested as either the characteristic withdrawal syndrome for the substance or continued use of the substance (or a closely related drug) to relieve or prevent withdrawal symptoms
- Taking the substance often in larger amounts or over a longer period than intended
- A persistent desire or unsuccessful efforts to cut down or control substance use
- Spending a great deal of time in activities necessary to obtain or use the substance or to recover from its effects
- Giving up social, occupational, or recreational activities because of substance use
- Continued use with the knowledge that it is causing or exacerbating a persistent or recurrent physical or psychological problem

Some researchers have added another category—*problematic use*—to describe adolescents who don't meet the strict diagnostic criteria for alcohol abuse or dependence, but who show two or more symptoms of alcohol dependence. The most common symptoms seen in these “diagnostic orphans” are:<sup>26</sup>

- Tolerance
- Using more or longer than intended
- Unsuccessful attempts to quit or cut down
- A considerable amount of time spent using

The specific signs and symptoms of intoxication, dependence and abuse may vary depending on the substance used (See **Table 1** and **Table 2**); however, major indicators that an adolescent may be engaged in problematic use or dependence include:<sup>25,27,28</sup>

- Difficulty sleeping
- Disruptive behavior
- Depression
- School avoidance
- Decline in academic performance
- Anxiety
- Rapid changes in mood or hostile outbursts
- Changes in peer group or failing to introduce peers to parents
- Changes in physical appearance or poor hygiene
- Secretive behaviors such as sneaking out, lying, and locking doors

### **Maria's Story\***

Maria is a 14-year-old girl who has been physically and sexually abused by her 22-year-old stepbrother for five years.

The first incident of abuse happened when she and her mother moved in with the new stepfamily, after having been evicted from their old apartment. In addition, Maria has seen her stepfather severely beat her mother several times, and is now constantly worried about her mother's safety. She also fears that someone will find out about the abuse and that she will be taken away from her mother.

Maria has become withdrawn at school and no longer participates in activities she once enjoyed. Once very popular with her peers, she has isolated herself from many of her friends and spends most of her time alone.

The only person Maria spends time with is an older cousin who lives in the neighborhood. Lately, they have been skipping school to smoke marijuana and drink alcohol.

Maria used to be an honor-roll student, but her grades have been spiraling downward. Her favorite teacher is extremely concerned and has been trying to get Maria to talk to her about what is causing such a change.

*\*\*"Maria" is a composite representation based on real teenage clients struggling with traumatic stress and substance abuse.*

## **Alcohol and Illicit Drugs: Prevalence Rates and General Information**

### **Alcohol**

Adolescents use alcohol more frequently than they do all other drugs combined. The National Longitudinal Study of Adolescent Health found that more than 30% of surveyed adolescents had drunk more than five drinks in a row in the past 12 months and more than 30% reported getting drunk during that same period.<sup>31,32</sup> Similarly, the most recent National Survey on Drug Use and Health found that more than **25% of underage drinkers are binge or heavy drinkers, and approximately 20%—one in five—report driving while under the influence** during

the past year.<sup>2</sup> In 2006, 63% of 8th graders and more than 80% of high-school age teens reported that alcohol was easy or very easy to obtain.<sup>12</sup>

### **Cannabinoids**

The cannabinoids are the most commonly used illegal drugs in the United States. According to the 2006 National Survey on Drug Abuse, **every day 6,000 people try marijuana for the first time and more than 63% of them—some 3,800 people—are under the age of 18.**

Overall, 6.7% of adolescents between the ages of 12 and 17 are current marijuana users.<sup>2</sup> In 2006, approximately 40% of 8th graders and three quarters of high school students reported that marijuana was easy or very easy to obtain.<sup>12</sup>

### **Cocaine**

Cocaine is a powerfully addictive central nervous system stimulant. Once the second-most commonly used illicit drug in the United States, it has recently been overtaken by prescription painkillers (see *Opioids*, below). According to the 2005 Youth Risk Behavior Surveillance Survey<sup>33</sup>, 7.6% of high school students surveyed had used cocaine at least once, and 3.4% had used within the last 30 days. Of note, the percentage of teens who report that cocaine (in any form) is easy or very easy to obtain rises with age: from approximately 20% in 8th grade to more than 50% in senior year of high school. Cocaine use in combination with alcohol is especially dangerous because it facilitates the production of cocaethylene, a cocaine metabolite that is more toxic than cocaine alone.

### **Gamma hydroxybutyrate (GHB)**

GHB was synthesized in 1960 for use as an anesthetic. In the United States, GHB has been widely abused since the early 1990s. It is often used by young and predominantly white partygoers in combination with various other drugs or alcohol at raves and other gatherings. It has been used in a number of sexual assaults and, like the drug Rohypnol (flunitrazepam), is known as a “date-rape drug” because of its ability to sedate and impair the memory of potential victims. Because it metabolizes quickly, there are often no traces of it in a victim’s bloodstream by the time the assault is remembered. GHB generally comes mixed with water or in powder form. It is commonly sold in small bottles (the size of complimentary shampoo containers supplied by hotels), which are generally inexpensive and contain about 10 “hits.”

GHB use has greatly increased in recent years, with the most prevalent use observed in the southeastern and western United States. In 2006, 0.8% of 8th graders, 0.7% of 10th graders, and 1.1% of 12th graders reported using GHB at least once in the prior year.<sup>12</sup> According to data gathered by the Drug Abuse Warning Network (DAWN), **in 2002 nearly 5,000 emergency room visits were related to use of GHB.**<sup>37</sup>

**Table 1. Common Drugs of Abuse and Their Effects**<sup>27,29,30</sup>

Category and Name	Examples of Commercial and Street Names	DEA Schedule*	How Administered**	Intoxication Effects	Potential Health Consequences
<b>Alcohol</b>	Booze, brew, hooch, sauce, forty, brewsky, hard stuff, hard A, liquor, spirits, various brand names	Not scheduled	Swallowed	Relaxation, decreased concentration, impaired judgment, coordination, and reaction time, loss of consciousness, blackouts, and memory lapses	Liver disease, ulcers, cancer (esophageal, oral, hepatic), hypertension, hypoglycemia, dependence, addiction
<b>Cannabinoids</b>				<b>Class effects</b>	
Hashish	Boom, chronic, gangster, hash, hash oil, hemp	I	Swallowed, smoked	Euphoria, slowed thinking and reaction time, confusion, impaired balance and coordination	Cough, frequent respiratory infections, impaired memory and learning, increased heart rate, anxiety, panic attacks, tolerance, addiction
Marijuana	Blunt, dope, ganja, grass, herb, joints, Mary Jane, pot, reefer, sinsemilla, skunk, weed	I	Swallowed, smoked		
<b>Depressants</b>				<b>Class Effects</b>	
Barbiturates	<i>Amytal, Nembutal, Seconal, Phenobarbital</i> : barbs, reds, red birds, phennies, tooies, yellows, yellow jackets	II, III, V	Injected, swallowed	Reduced anxiety, feeling of well-being, lowered inhibitions, slowed pulse and breathing, lowered blood pressure, poor concentration	Fatigue, confusion, impaired coordination, memory, judgment, addiction, respiratory depression and arrest, dependence, addiction, death
Benzodiazepines (other than flunitrazepam)	<i>Ativan, Halcion, Librium, Valium, Xanax</i> : candy, downers, sleeping pills, tranks	IV	Swallowed, injected	Sedation, drowsiness	Depression, unusual excitement, fever, irritability, poor judgment, slurred speech, dizziness, life-threatening withdrawal
Flunitrazepam***	<i>Rohypnol</i> : forget-me pill, Mexican Valium, R2, Roche, roofies, roofinol, rope, rophies	IV	Swallowed, snorted	Sedation, drowsiness	Dizziness
					Visual and gastrointestinal disturbances, urinary retention, memory loss for the time under the drug's effects

Category and Name	Examples of Commercial and Street Names	DEA Schedule*	How Administered**	Intoxication Effects	Potential Health Consequences
GHB***	gamma-hydroxybutyrate: G, Georgia home boy, grievous bodily harm, liquid ecstasy	I	Swallowed	Drowsiness, nausea	Vomiting, headache, loss of consciousness, loss of reflexes, seizures, coma, death
Methaqualone	<i>Quaalude, Sopor, Parest: ludes, mandrex, quad, quay</i>	I	Injected, swallowed	Euphoria	Depression, poor reflexes, slurred speech, coma
<b>Dissociative Anesthetics</b>					
<b>Class Effects</b>					
				Increased heart rate and blood pressure, impaired motor function	Memory loss, numbness, nausea, vomiting
Ketamine	<i>Ketalar SV: cat Valiums, K, Special K, vitamin K</i>	III	Injected, snorted, smoked	At high doses, delirium, depression, respiratory depression and arrest	
PCP and analogs	<i>Phencyclidine: angel dust, boat, hog, love boat, peace pill</i>	I, II	Injected, swallowed, smoked	Possible decrease in blood pressure and heart rate, panic, aggression, violence	Loss of appetite, depression
<b>Hallucinogens</b>					
<b>Class Effects</b>					
				Altered states of perception and feeling, nausea	Persisting perception disorder (flashbacks)
LSD	Lysergic acid diethylamide: acid, blotter, boomers, cubes, microdot, yellow sunshines	I	Swallowed, absorbed through mouth tissues	Increased body temperature, heart rate, and blood pressure, loss of appetite, sleeplessness, numbness, weakness, tremors, persistent mental disorders	
Mescaline	Buttons, cactus, mesc, peyote	I	Swallowed, smoked	Increased body temperature, heart rate, and blood pressure, loss of appetite, sleeplessness, numbness, weakness, tremors	
Psilocybin	Magic mushroom, purple passion, 'shrooms	I	Swallowed	Nervousness, paranoia	

**Table 1. Common Drugs of Abuse and Their Effects<sup>27,29,30</sup> (continued)**

Category and Name	Examples of Commercial and Street Names	DEA Schedule*	How Administered**	Intoxication Effects	Potential Health Consequences
<b>Opioids and Morphine Derivatives</b>					
Codeine	<i>Empirin with Codeine, Fiorinal with Codeine, Robitussin A-C, Tylenol with Codeine: Captain Cody, Cody, schoolboy (with glutethimide), doors &amp; fours, loads, pancakes and syrup</i>	II, III, IV, V	Injected, swallowed	Pain relief, euphoria, drowsiness	Nausea, constipation, confusion, sedation, respiratory depression and arrest, tolerance, addiction, unconsciousness, coma, death
Fentanyl and fentanyl analogs	<i>Actiq, Duragesic, Sublimaze: Apache, China girl, China white, dance fever, friend, goodfella, jackpot, murder 8, TNT, Tango and Cash</i>	I, II	Injected, smoked, snorted	Less analgesia, sedation, and respiratory depression than morphine	
Heroin	<i>diacetylmorphine: brown sugar, dope, H, horse, junk, skag, skunk, smack, white horse</i>	I	Injected, smoked, snorted	Staggering gait	
Morphine	<i>Roxanol, Duramorph: M, Miss Emma, monkey, white stuff</i>	II, III	Injected, swallowed, smoked		
Opium	<i>laudanum, paregoric: big O, black stuff, block, gum, hop</i>	II, III, V	Swallowed, smoked		
Oxycodone HCL	<i>OxyContin: Oxy, O.C., killer</i>	II	Swallowed, snorted, injected		
Hydrocodone bitartrate, acetaminophen	<i>Vicodin: vike, Watson-387</i>	II	Swallowed		

Category and Name	Examples of Commercial and Street Names	DEA Schedule*	How Administered**	Intoxication Effects	Potential Health Consequences
<b>Stimulants</b>				<b>Class Effects</b>	
Amphetamine	<i>Biphphetamine, Dexedrine:</i> bennies, black beauties, crosses, hearts, LA turnaround, speed, truck drivers, uppers	II	Injected, swallowed, smoked, snorted	Increased heart rate, blood pressure, metabolism; feelings of exhilaration, energy, increased mental alertness Rapid breathing	Rapid or irregular heart beat, reduced appetite, weight loss, nervousness, insomnia, heart failure Tremor, loss of coordination, irritability, anxiousness, restlessness, delirium, panic, paranoia, impulsive behavior, aggressiveness, tolerance, addiction, psychosis
Cocaine	<i>Cocaine hydrochloride:</i> blow, bump, C, candy, Charlie, coke, crack, flake, rock, snow, toot	II	Injected, smoked, snorted	Increased temperature	Chest pain, respiratory failure, nausea, abdominal pain, strokes, seizures, headaches, malnutrition, panic attacks
MDMA (methylenedioxy-methamphetamine)	Adam, clarity, ecstasy, Eve, lover's speed, peace, STP, X, XTC	I	Swallowed	Mild hallucinogenic effects, increased tactile sensitivity, empathetic feelings	Impaired memory and learning, hyperthermia, cardiac toxicity, renal failure, liver toxicity
Methamphetamine	<i>Desoxyn:</i> chalk, crank, crystal, fire, glass, go fast, ice, meth, speed	II	Injected, swallowed, smoked, snorted	Aggression, violence, psychotic behavior	Memory loss, cardiac and neurological damage, dental decay and damage, impaired memory and learning, tolerance, addiction
Methylphenidate (safe and effective for treatment of ADHD)	<i>Ritalin:</i> JIF, MPH, R-ball, Skippy, the smart drug, vitamin R	II	Injected, swallowed, snorted		
Nicotine	Cigarettes, cigars, smokeless tobacco, snuff, spit tobacco, bidis, chew	Not scheduled	Smoked, snorted, taken in snuff and spit tobacco		Additional effects attributable to tobacco exposure: adverse pregnancy outcomes, chronic lung disease, cardiovascular disease, stroke, cancer, tolerance, addiction

**Table 1. Common Drugs of Abuse and Their Effects<sup>27,29,30</sup> (continued)**

Category and Name	Examples of Commercial and Street Names	DEA Schedule*	How Administered**	Intoxication Effects	Potential Health Consequences
<b>Other Compounds</b>					
Anabolic steroids	Anadrol, Oxandrin, Durabolin, Depo-Testosterone, Equipoise: roids, juice	III	Injected, swallowed, applied to skin	None	Hypertension, blood clotting and cholesterol changes, liver cysts and cancer, kidney cancer, hostility and aggression, acne. In adolescents, premature stoppage of growth. In males, prostate cancer, reduced sperm production, shrunken testicles, breast enlargement. In females, menstrual irregularities, development of beard and other masculine characteristics
Dextromethorphan (DXM)	Found in some cough and cold medications, Robotripping, Robo, Triple C	Not scheduled	Swallowed	Dissociative effects, distorted visual perceptions to complete dissociative effects	For effects at higher doses see “dissociative anesthetics”
Inhalants	Solvents (paint thinners, gasoline, glues), gases (butane, propane, aerosol propellants, nitrous oxide), nitrites (isoamyl, isobutyl, cyclohexyl), laughing gas, poppers, snappers, whippets	Not scheduled	Inhaled through nose or mouth	Stimulation, loss of inhibition, headache, nausea or vomiting, slurred speech, loss of motor coordination, wheezing	Unconsciousness, cramps, weight loss, muscle weakness, depression, memory impairment, damage to cardiovascular and nervous systems, sudden death

\*Schedule I and II drugs have a high potential for abuse. They require greater storage security and have a quota on manufacturing, among other restrictions. Schedule I drugs are available for research only and have no approved medical use; Schedule II drugs are available only by prescription (unrefillable) and require a form for ordering. Schedule III and IV drugs are available by prescription, may have five refills in six months, and may be ordered orally. Some Schedule V drugs are available over the counter.

\*\*Taking drugs by injection can increase the risk of infection through needle contamination with staphylococci, HIV, hepatitis, and other organisms.

\*\*\*Associated with sexual assaults

**Sources:** National Institute on Drug Abuse. (2007). *Commonly Abused Drugs*. Bethesda, MD: National Institute on Drug Abuse, National Institutes of Health. Retrieved April 28, 2008 from <http://www.nida.nih.gov/DrugPages/DrugsofAbuse.html>; Saitz, R. (2007). Treatment of alcohol and other drug dependence. *Liver Transpl*, 13(11 Suppl 2), S59-64; Saitz, R. (2005). Clinical practice. Unhealthy alcohol use. *N Engl J Med*, 352(6), 596-607.

### **Hallucinogens**

Hallucinogens are a class of illicit drugs that alter perception and, in some cases, produce euphoria. Hallucinogen use is generally rare in the overall population, although higher among teens and young adults. In 2006, reported lifetime use of any hallucinogen was less than 4% among 8th graders, approximately 6% among 10th graders, and slightly more than 8% among 12th graders. Reported lifetime use was even lower for LSD: 1.6%, 2.7%, and 3.3% among 8th, 10th, and 12th graders, respectively.

### **Inhalants**

Inhalants are breathable chemical vapors that produce psychoactive effects. Sniffing inhalants is often referred to as “huffing.” Inhalants can also be used by placing the inhalant in a bag and then sniffing into the bag or putting the bag over the head (“bagging”). Inhalants are very easy to find, are not illegal, and are less expensive than most drugs.

According to the most recent National Survey on Drug Use and Health, inhalants are the second most frequently used illicit drug among 12- to 13-year-olds, third among 14- and 15-year-olds, and fourth among 16- and 17-year-olds.<sup>2</sup> Most inhalant users start using before their 16th birthday.<sup>2</sup>

### **MDMA (Ecstasy)**

MDMA acts as both a stimulant and a hallucinogen. It is among the most frequently reported “club drugs.” In the 2006 National Survey on Drug Use and Health, approximately 500,000 teens between the ages of 12 and 17 reported using MDMA within the last 30 days.<sup>2</sup> Overall use rates increase with age, from less than 2% among 8th graders to more than 4% in 12th graders.<sup>12</sup> Perceived availability of MDMA also increases with age: less than 15% of 8th graders report that it is easy or very easy to obtain, versus approximately 25% of 10th to 12th graders.<sup>12</sup>

### **Methamphetamine**

Methamphetamine is an addictive stimulant closely related to amphetamine. It has longer lasting and more toxic effects on the central nervous system than amphetamine, and is often made in small, illegal laboratories called “meth labs,” using relatively inexpensive over-the-counter ingredients. Methamphetamine has a high potential for abuse and addiction. Methamphetamine users may experience unpredictable mood swings, as well as tooth decay caused by dry mouth and excessive tooth grinding. Users commonly have the sensation that insects are crawling on their skin, and many users will scratch themselves raw, causing lacerations on their face and arms.

During 2006, 731,000 people age 12 or older in the United States reported current use of methamphetamine, with highest rates of use among older adolescents and young adults.<sup>2</sup> Less than 2% of 8th and 10th graders reported using during the past year, versus 2.5% of 12th graders.<sup>12</sup>

## **Nicotine**

Nicotine is one of the most frequently used addictive drugs. In the 2006 National Survey on Drug Use and Health, 12.9% of 12- to 17-year-olds—3.3 million teens—reported using some form of tobacco during the past month. The number of current cigarette smokers increases with age, from a low of 2% among 12- to 13-year-olds to a high of 20% among 16- and 17-year-olds.<sup>2</sup> Such high prevalence rates may be accounted for by research that suggests **adolescents are more susceptible to rapid development of nicotine addiction**, with measurable symptoms of dependence observable after only a few weeks of casual use.<sup>38</sup>

## **Opioids**

Opioids are the most powerful known pain relievers, and their analgesic and euphoric effects have been known since 4000 BC. In the United States, heroin use has increased over the last decade, particularly among adolescents, although overall heroin use remains low. In 2006, 1.4% of 8th graders, 10th graders, and 12th graders reported using heroin at least once in their lifetime. The same survey found that less than 1% of youth in each of these grades reported using heroin in the year prior to the survey.<sup>12</sup>

By contrast, the abuse of prescription painkillers—particularly narcotics such as Vicodin, OxyContin, Percocet, Demerol, and Darvon—has risen dramatically. The overall incidence of emergency department visits related to narcotic abuse has been increasing in the U.S. since the mid-1990s and has more than doubled between 1994 and 2001.<sup>39</sup> According to emergency department data, **in 2005 nearly 50,000 youth between the ages of 12 and 17 presented to the emergency department because of non-medical uses of prescription painkillers**. Nationally, an estimated 14% of high school seniors have used prescription drugs for nonmedical reasons at least once in their lifetime, making prescription drugs the second-most commonly abused illegal substance by teenagers, after marijuana.<sup>2</sup>

## **Steroids**

Anabolic steroids were originally developed in the late 1930s to treat hypogonadism (a condition in which the testes do not produce sufficient testosterone for normal growth, development, and sexual functioning); steroids are legal by prescription but are often abused. According to the 2006 Monitoring the Future survey, most teen anabolic steroids users are male.<sup>12</sup> Among male students, use of steroids during the past year was reported by approximately 1% of 8th graders and 10th graders, and nearly 2% of 12th graders. Adolescents may be more likely to abuse anabolic steroids if they have experienced muscle dysmorphia, a history of physical or sexual abuse, or a history of engaging in high-risk behaviors.<sup>40</sup>

**Table 2: Sources of Additional Information on Specific Drugs of Abuse**

Drug Class/Drug	Source	URL
<b>Alcohol</b>		
	NIAAA	<a href="http://www.niaaa.nih.gov">http://www.niaaa.nih.gov</a>
	Leadership to Keep Children Alcohol Free	<a href="http://www.alcoholfreechildren.org/">http://www.alcoholfreechildren.org/</a>
<b>Cannabinoids</b>		
	DEA	<a href="http://www.usdoj.gov/dea/concern/marijuana.html">http://www.usdoj.gov/dea/concern/marijuana.html</a>
	NIDA	<a href="http://www.drugabuse.gov/PDF/InfoFacts/Marijuana06.pdf">http://www.drugabuse.gov/PDF/InfoFacts/Marijuana06.pdf</a>
<b>Depressants</b>		
Rohypnol/GHB	DEA	<a href="http://www.usdoj.gov/dea/concern/ghb_factsheet.html">http://www.usdoj.gov/dea/concern/ghb_factsheet.html</a>
	NIDA	<a href="http://www.drugabuse.gov/PDF/Infofacts/Rohypnol06.pdf">http://www.drugabuse.gov/PDF/Infofacts/Rohypnol06.pdf</a>
<b>Hallucinogens</b>		
General	DEA	<a href="http://www.usdoj.gov/dea/concern/hallucinogens.html">http://www.usdoj.gov/dea/concern/hallucinogens.html</a>
	NIDA	<a href="http://www.drugabuse.gov/PDF/RRHalluc.pdf">http://www.drugabuse.gov/PDF/RRHalluc.pdf</a>
LSD	DEA	<a href="http://www.usdoj.gov/dea/concern/lisd.html">http://www.usdoj.gov/dea/concern/lisd.html</a>
<b>Inhalants</b>		
	DEA	<a href="http://www.usdoj.gov/dea/concern/inhalants.html">http://www.usdoj.gov/dea/concern/inhalants.html</a>
	NIDA	<a href="http://www.nida.nih.gov/Infofacts/inhalants.html">http://www.nida.nih.gov/Infofacts/inhalants.html</a>
<b>Opioids</b>		
Heroin	DEA	<a href="http://www.usdoj.gov/dea/concern/heroin.html">http://www.usdoj.gov/dea/concern/heroin.html</a>
	NIDA	<a href="http://www.nida.nih.gov/Infofacts/heroin.html">http://www.nida.nih.gov/Infofacts/heroin.html</a>
OxyContin	DEA	<a href="http://www.usdoj.gov/dea/concern/oxycontin.html">http://www.usdoj.gov/dea/concern/oxycontin.html</a>
Prescription Pain Medications	NIDA	<a href="http://www.nida.nih.gov/Infofacts/Painmed.html">http://www.nida.nih.gov/Infofacts/Painmed.html</a>
<b>Stimulants</b>		
Cocaine/crack	DEA	<a href="http://www.usdoj.gov/dea/concern/cocaine.html">http://www.usdoj.gov/dea/concern/cocaine.html</a>
	NIDA	<a href="http://www.nida.nih.gov/Infofacts/cocaine.html">http://www.nida.nih.gov/Infofacts/cocaine.html</a>
MDMA (Ecstasy)	DEA	<a href="http://www.usdoj.gov/dea/concern/mdma.html">http://www.usdoj.gov/dea/concern/mdma.html</a>
	NIDA	<a href="http://www.nida.nih.gov/Infofacts/ecstasy.html">http://www.nida.nih.gov/Infofacts/ecstasy.html</a>
Methamphetamine	DEA	<a href="http://www.usdoj.gov/methawareness/">http://www.usdoj.gov/methawareness/</a>
	NIDA	<a href="http://www.nida.nih.gov/Infofacts/methamphetamine.html">http://www.nida.nih.gov/Infofacts/methamphetamine.html</a>
Nicotine	NIDA	<a href="http://www.nida.nih.gov/infofacts/tobacco.html">http://www.nida.nih.gov/infofacts/tobacco.html</a>
<b>Steroids</b>		
	DEA	<a href="http://www.usdoj.gov/dea/concern/steroids.html">http://www.usdoj.gov/dea/concern/steroids.html</a>
	NIDA	<a href="http://www.nida.nih.gov/Infofacts/Steroids.html">http://www.nida.nih.gov/Infofacts/Steroids.html</a>

DEA=Drug Enforcement Agency, NIAAA=National Institute on Alcohol Abuse and Alcoholism, NIDA=National Institute on Drug Abuse

## Recognizing Withdrawal

Regular users of alcohol and drugs may eventually develop tolerance and need larger amounts of the substance to achieve the same effect. When the body adjusts to having the substance present, users may feel emotionally and physically ill when they discontinue use (withdrawal).

Substance use initially may serve as a means to find pleasure or relief from emotional distress, but once physiological dependence develops, substance use becomes a way to manage cravings and withdrawal symptoms (see **Table 3** below). Adolescents exhibiting signs of withdrawal require medical as well as mental health intervention to prevent severe (or, in the case of alcohol, potentially fatal) physiological reactions.

**Table 3. Signs and Symptoms of Withdrawal**

Substance	Withdrawal Symptoms
<b>Alcohol</b>	Craving for alcohol, insomnia, vivid dreams, anxiety, hypervigilance, agitation, irritability, loss of appetite (i.e., anorexia), nausea, vomiting, headache, sweating, tremors, tactile and auditory hallucinations, seizures, delirium tremens
<b>Cannabinoids</b> (marijuana, hashish)	Irritability, anxiety and physical tension, decreases in appetite and mood
<b>Cocaine</b> (crack)	Agitation/irritability, depression and/or anxiety, intense cravings, angry outbursts, lack of motivation, fatigue, nausea/vomiting, shaking
<b>GHB</b> (date rape drug)	Profuse sweating, anxiety attacks, high blood pressure and pulse, hallucination, rapid pulse
<b>Inhalants</b> (paint thinner, gasoline, glues, laughing gas, poppers, snappers, whippets)	Hand tremors, excess sweating, constant headaches, nervousness
<b>Methylenedioxymethamphetamine</b> (MDMA, Ecstasy, X, XTC, etc.)	Depression, anxiety, including panic attacks, depersonalization/derealization, paranoid delusions, sleeplessness
<b>Methamphetamine</b>	Irritability, moderate-to-severe depression, psychotic reactions, anxiety
<b>Nicotine</b>	Irritability/aggression, depression, poor concentration, increased appetite, light-headedness, restlessness, night-time awakenings, craving
<b>Opioids and Morphine Derivatives</b> (codeine, fentanyl, heroin, morphine, opium, oxycodone, hydrocodone)	Nausea/vomiting, insomnia, diarrhea, irritability, loss of appetite, shaking, tremors, panic, chills or profuse sweating
<b>Steroids</b>	Nausea/vomiting/diarrhea, joint/muscle pain or weakness, weight loss, fever, headache and fatigue, low blood pressure

## Substance Use Problems: Risks and Protective Factors

In order to provide appropriate, effective care to teens with—or at risk for—substance abuse disorders, it is important to recognize and evaluate the various factors that can enhance or mitigate risk. These factors can have a profound impact on how teenagers cope with difficulties, and on long-term treatment outcomes. For example, studies have shown that adolescents who use positive coping strategies such as good decision-making skills, assertiveness, and cognitive mastery, are less likely to use substances or engage in delinquent behavior.<sup>41</sup> Conversely, adolescents who engage in avoidant stress coping and have difficulty in managing temptations are more likely to use drugs and alcohol.<sup>42</sup>

Gender is an important factor in the use and effects of alcohol and other drugs of abuse. Boys tend to have opportunities for use earlier in life and thus tend to initiate at younger ages.<sup>43</sup> However, once girls have the opportunity to experiment, they are just as likely as boys are to use.<sup>44</sup> Data from the 2006 Monitoring the Future survey suggest that there are similar trends for substance use among boys and girls, but that boys are more likely to consume marijuana, steroids, and smokeless tobacco, whereas girls are more likely to abuse amphetamines and methamphetamine.<sup>12</sup> Rates of drug use for both genders have been converging over the past decade.<sup>45</sup>

Research indicates that there are few differences in the type or amount of substances that male and female adolescents use; however, the effects of substances on their emotional and physiological health can vary. Substance abuse stemming from traumatic events and/or psychological problems is more common in females than in males. Additionally, female substance abusers are more vulnerable to some of the physiological effects and psychological difficulties that can result from substance use. Research has also shown that females have a greater chance of developing neurological problems associated with alcohol abuse.<sup>46</sup>

In addition to varying by gender, adolescent drug and alcohol use also tends to vary by population. For example, rates of current drug use among American Indian/Alaska Native Youth are approximately twice the rate among teens overall.<sup>2</sup>

Much research has been devoted to identifying common risks and protective factors associated with adolescent substance use. **Table 4** outlines some of the factors that are associated with the individual, family, peer, school, and community domains of an adolescent's life. In general, teens are less likely to succumb to external pressures toward drug use if they have a strong sense of attachment to parents who clearly communicate their disapproval of substance use and antisocial behaviors<sup>47-49</sup> and a strong commitment to doing well in school.<sup>50,51</sup> Conversely, associating with substance abusing peers<sup>41,48,52-55</sup>, and limited availability of educational and recreational opportunities<sup>56</sup> are associated with increased risk of substance abuse.

**Table 4: Risks and Protective Factors Associated with Adolescent Substance Use**

Domain	Risk Factors	Protective Factors
Individual	<p>Aggressive behavior</p> <p>Genetic vulnerability</p> <p>Low self-esteem</p> <p>Academic failure</p> <p>Risk-taking propensity</p> <p>Impulsivity</p>	<p>Self-control</p> <p>Positive relationships with adults (e.g., parents, teachers, doctors, law enforcement officers, etc.)</p> <p>Involvement in extracurricular activities</p> <p>Positive future plans</p>
Family	<p>Lack of parental supervision</p> <p>Family member with a history of alcohol or other drug abuse</p> <p>Lack of clear rules and consequences regarding alcohol and other drug use</p> <p>Family conflict/abuse</p> <p>Loss of employment</p>	<p>Parental monitoring</p> <p>Close family relationships</p> <p>Education valued and encouraged; parents actively involved</p> <p>Clear expectations and limits regarding alcohol and other drug use</p> <p>Shared family responsibilities including chores and decision making</p> <p>Nurturing family members who support each other</p>
Peer	<p>Substance abuse</p> <p>Ties to deviant peers/gang involvement</p> <p>Inappropriate sexual activity among peers</p>	<p>Academic competence</p> <p>Involvement in substance-free activities</p> <p>Negative view of alcohol and other drug use among peers</p>
School	<p>Drug availability</p> <p>Students lack commitment or sense of belonging at school</p> <p>High numbers of students who fail academically at school</p> <p>Parents and community members not actively involved</p>	<p>Antidrug use policies</p> <p>Positive attitudes toward school and regular school attendance promoted</p> <p>Goal-setting, academic achievement, and positive social development encouraged</p> <p>Tutoring made available</p> <p>Leadership and decision-making opportunities for students provided</p> <p>Substance-free events sponsored</p>
Community	<p>Poverty</p> <p>Alcohol and other drugs readily available</p> <p>Laws and ordinances unclear or inconsistently enforced</p> <p>Norms unclear or encourage use of drugs</p> <p>Lack of sense of connection to community</p> <p>High unemployment</p> <p>Youths' activities not monitored</p>	<p>Laws and ordinances consistently enforced</p> <p>Norms and policies encourage nonuse of drugs</p> <p>Strong sense of connection to neighborhood</p> <p>Jobs and other resources (e.g., housing, healthcare, childcare, community service opportunities, recreation; religious organizations) available</p>

## Conclusion

Youth services providers should always be aware of the links between adolescent traumatic stress and substance abuse problems. The traditional division between mental health and substance abuse service systems, the limited availability of evidence-based integrated approaches, and the difficulties associated with having separate sources of funding available for these types of problems all can pose many challenges to providing integrated and coordinated care. However, a coordinated approach offers the best hope of lasting recovery in teens struggling with the effects of traumatic stress and substance abuse.

## References

1. Kilpatrick, D. G., Saunders, B. E., and Smith, D. W. (2003). *Youth victimization: Prevalence and implications. NIJ research in brief*. Washington, DC: U.S. Department of Justice, Office of Justice Programs, National Institute of Justice. Retrieved April 16, 2008 from <http://www.ncjrs.gov/pdffiles1/nij/194972.pdf>.
2. Substance Abuse and Mental Health Services Administration. (2007). *Results from the 2006 National Survey on Drug Use and Health: National findings*. Rockville, MD: Department of Health and Human Services. Retrieved April 7, 2008 from <http://www.oas.samhsa.gov/nsduh/2k6nsduh/2k6Results.pdf>.
3. Knight, J. R., Harris, S. K., Sherritt, L., Van Hook, S., Lawrence, N., Brooks, T., et al. (2007). Prevalence of positive substance abuse screen results among adolescent primary care patients. *Arch Pediatr Adolesc Med*, 161(11), 1035–41.
4. Funk, R. R., McDermeit, M., Godley, S. H., and Adams, L. (2003). Maltreatment issues by level of adolescent substance abuse treatment: The extent of the problem at intake and relationship to early outcomes. *Child Maltreat*, 8(1), 36–45.
5. Deykin, E. Y., and Buka, S. L. (1997). Prevalence and risk factors for posttraumatic stress disorder among chemically dependent adolescents. *Am J Psychiatry*, 154(6), 752–7.
6. Clark, D. B., Lesnick, L., and Hegedus, A. M. (1997). Traumas and other adverse life events in adolescents with alcohol abuse and dependence. *J Am Acad Child Adolesc Psychiatry*, 36(12), 1744–51.
7. Giaconia, R. M., Reinherz, H. Z., Hauf, A. C., Paradis, A. D., Wasserman, M. S., and Langhammer, D. M. (2000). Comorbidity of substance use and post-traumatic stress disorders in a community sample of adolescents. *Am J Orthopsychiatry*, 70(2), 253–62.
8. Perkonig, A., Kessler, R. C., Storz, S., and Wittchen, H. U. (2000). Traumatic events and post-traumatic stress disorder in the community: Prevalence, risk factors and comorbidity. *Acta Psychiatr Scand*, 101(1), 46–59.
9. De Bellis, M. D., Narasimhan, A., Thatcher, D. L., Keshavan, M. S., Soloff, P., and Clark, D. B. (2005). Prefrontal cortex, thalamus, and cerebellar volumes in adolescents and young adults with adolescent-onset alcohol use disorders and comorbid mental disorders. *Alcohol Clin Exp Res*, 29(9), 1590–600.
10. Zeigler, D. W., Wang, C. C., Yoast, R. A., Dickinson, B. D., McCaffree, M. A., Robinowitz, C. B., et al. (2005). The neurocognitive effects of alcohol on adolescents and college students. *Prev Med*, 40(1), 23–32.
11. Diamond, G., Panichelli-Mindel, S. M., Shera, D., Dennis, M., Tims, F., and Ungemack, J. (2006). Psychiatric syndromes in adolescents with marijuana abuse and dependency in outpatient treatment. *Journal of Child & Adolescent Substance Abuse*, 15(4), 37–54.

12. Johnston, L. D., O'Malley, P. M., Bachman, J. G., and Schulenberg, J. E. (2007). *Monitoring the Future: National results on adolescent drug use: Overview of key findings, 2006*. Bethesda, MD: National Institute on Drug Abuse. Retrieved April 16, 2008 from <http://www.monitoringthefuture.org/pubs/monographs/overview2006.pdf>.
13. DeWit, D. J., Adlaf, E. M., Offord, D. R., and Ogborne, A. C. (2000). Age at first alcohol use: A risk factor for the development of alcohol disorders. *Am J Psychiatry*, 157(5), 745–50.
14. Kann, L., Kinchen, S. A., Williams, B. I., Ross, J. G., Lowry, R., Grunbaum, J. A., et al. (2000). Youth risk behavior surveillance—United States, 1999. *MMWR CDC Surveill Summ*, 49(5), 1–96.
15. Coffey, S. F., Saladin, M. E., Drobos, D. J., Brady, K. T., Dansky, B. S., and Kilpatrick, D. G. (2002). Trauma and substance cue reactivity in individuals with comorbid posttraumatic stress disorder and cocaine or alcohol dependence. *Drug Alcohol Depend*, 65(2), 115–27.
16. Saladin, M. E., Drobos, D. J., Coffey, S. F., Dansky, B. S., Brady, K. T., and Kilpatrick, D. G. (2003). PTSD symptom severity as a predictor of cue-elicited drug craving in victims of violent crime. *Addict Behav*, 28(9), 1611–29.
17. Waldrop, A. E., Back, S. E., Verduin, M. L., and Brady, K. T. (2007). Triggers for cocaine and alcohol use in the presence and absence of posttraumatic stress disorder. *Addict Behav*, 32(3), 634–9.
18. Titus, J. C., Dennis, M. L., White, W. L., Scott, C. K., and Funk, R. R. (2003). Gender differences in victimization severity and outcomes among adolescents treated for substance abuse. *Child Maltreat*, 8(1), 19–35.
19. Grella, C. E., and Joshi, V. (2003). Treatment processes and outcomes among adolescents with a history of abuse who are in drug treatment. *Child Maltreat*, 8(1), 7–18.
20. Read, J. P., Brown, P. J., and Kahler, C. W. (2004). Substance use and posttraumatic stress disorders: Symptom interplay and effects on outcome. *Addict Behav*, 29(8), 1665–72.
21. Brown, P. J. (2000). Outcome in female patients with both substance use and post-traumatic stress disorders. *Alcoholism Treatment Quarterly*, 13(3), 127–135.
22. Ouimette, P. C., Brown, P. J., and Najavits, L. M. (1998). Course and treatment of patients with both substance use and posttraumatic stress disorders. *Addict Behav*, 23(6), 785–95.
23. Titus, J. C., Godley, S. H., and White, M. K. (2006). A post-treatment examination of adolescents' reasons for starting, quitting, and continuing the use of drugs and alcohol. *Journal of Child & Adolescent Substance Abuse*, 16(2), 31–49.
24. Gardner, D. (2002). Skid Row high. *The Ottawa Citizen*. April 21, 2002.
25. American Psychiatric Association. (2000). *Diagnostic and Statistical Manual of Mental Disorders, DSM-IV-TR* (Text Revision) 4th ed. Washington, DC: American Psychiatric Publishing, Inc.

26. Pollock, N. K., and Martin, C. S. (1999). Diagnostic orphans: Adolescents with alcohol symptoms who do not qualify for DSM-IV abuse or dependence diagnoses. *Am J Psychiatry*, 156(6), 897–901.
27. National Institute on Drug Abuse. (2007). *Commonly Abused Drugs*. Bethesda, MD: National Institute on Drug Abuse, National Institutes of Health. Retrieved April 28, 2008 from <http://www.nida.nih.gov/DrugPages/DrugsofAbuse.html>.
28. Hawkins, J. D., Catalano, R. F., and Miller, J. Y. (1992). Risk and protective factors for alcohol and other drug problems in adolescence and early adulthood: Implications for substance abuse prevention. *Psychol Bull*, 112(1), 64–105.
29. Saitz, R. (2007). Treatment of alcohol and other drug dependence. *Liver Transpl*, 13(11 Suppl 2), S59–64.
30. Saitz, R. (2005). Clinical practice. Unhealthy alcohol use. *N Engl J Med*, 352(6), 596–607.
31. Udry, J. R. E. (2003). *The National Longitudinal Study of Adolescent Health (Add Health), Waves I & II, 1994–1996; Wave III, 2001–2002*. Chapel Hill, NC: Carolina Population Center, University of North Carolina at Chapel Hill. Retrieved from <http://www.cpc.unc.edu/projects/addhealth>.
32. Bartlett, R., Holditch-Davis, D., and Belyea, M. (2007). Problem behaviors in adolescents. *Pediatr Nurs*, 33(1), 13–18.
33. Eaton, D. K., Kann, L., Kinchen, S., Ross, J., Hawkins, J., Harris, W. A., et al. (2006). Youth risk behavior surveillance—United States, 2005. *MMWR Surveill Summ*, 55(5), 1–108.
34. Lepere, B., and Charbit, B. (2002). Cardiovascular complications of cocaine use: Recent points on cocaethylene toxicity. *Ann Med Interne (Paris)*, 153(3 Suppl), 1S45–6.
35. McCance-Katz, E. F., Kosten, T. R., and Jatlow, P. (1998). Concurrent use of cocaine and alcohol is more potent and potentially more toxic than use of either alone—a multiple-dose study. *Biol Psychiatry*, 44(4), 250–9.
36. Wilson, L. D., Jeromin, J., Garvey, L., and Dorbandt, A. (2001). Cocaine, ethanol, and cocaethylene cardiotoxicity in an animal model of cocaine and ethanol abuse. *Acad Emerg Med*, 8(3), 211–22.
37. Drug Abuse Warning Network. (2004). *The DAWN Report: Club drugs, 2002 update*. Rockville, MD: Substance Abuse and Mental Health Services Administration, Office of Applied Studies. Retrieved May 1, 2008 from [http://dawninfo.samhsa.gov/old\\_dawn/pubs\\_94\\_02/shortreports/files/DAWN\\_tdr\\_club\\_drugs02.pdf](http://dawninfo.samhsa.gov/old_dawn/pubs_94_02/shortreports/files/DAWN_tdr_club_drugs02.pdf).
38. National Institute on Drug Abuse. (2006). *NIDA research report series: Cigarettes and other tobacco products*. Rockville, MD: National Institute on Drug Abuse, US Department of Health and Human Services, National Institutes of Health. Retrieved from <http://www.nida.nih.gov/pdf/infofacts/Tobacco06.pdf>.

39. Substance Abuse and Mental Health Services Administration Office of Applied Studies. (2007). *Drug Abuse Warning Network, 2005: National Estimates of Drug-Related Emergency Department Visits*. Rockville, MD: U.S. Department of Health & Human Services. Retrieved May 1, 2008 from <http://dawninfo.samhsa.gov/files/DAWN-ED-2005-Web.pdf>.
40. National Institute on Drug Abuse. (2007). *NIDA Info Facts: Steroids (Anabolic-Androgenic)*. Rockville, MD: National Institute on Drug Abuse. Retrieved April 28, 2008, from <http://www.nida.nih.gov/PDF/Infofacts/Steroids07.pdf>.
41. Griffin, K. W., Botvin, G. J., Scheier, L. M., Doyle, M. M., and Williams, C. (2003). Common predictors of cigarette smoking, alcohol use, aggression, and delinquency among inner-city minority youth. *Addict Behav*, 28(6), 1141–8.
42. Wagner, E. F., Myers, M. G., and McIninch, J. L. (1999). Stress-coping and temptation-coping as predictors of adolescent substance use. *Addict Behav*, 24(6), 769–79.
43. Van Etten, M. L., Neumark, Y. D., and Anthony, J. C. (1999). Male-female differences in the earliest stages of drug involvement. *Addiction*, 94(9), 1413–9.
44. Van Etten, M. L., and Anthony, J. C. (2001). Male-female differences in transitions from first drug opportunity to first use: Searching for subgroup variation by age, race, region, and urban status. *J Womens Health Gen Based Med*, 10(8), 797–804.
45. Wallace, J. M., Jr., Bachman, J. G., O'Malley, P. M., Schulenberg, J. E., Cooper, S. M., and Johnston, L. D. (2003). Gender and ethnic differences in smoking, drinking and illicit drug use among American 8th, 10th and 12th grade students, 1976–2000. *Addiction*, 98(2), 225–34.
46. Brady, T., and Ashley, O. E. (2005). *Women in substance abuse treatment: Results from the Alcohol and Drug Services Study (ADSS)*. Rockville, MD: Substance Abuse and Mental Health Services Administration, Office of Applied Studies. Retrieved May 1, 2008 from <http://www.oas.samhsa.gov/WomenTX/WomenTX.htm>.
47. Kostelecky, K. L. (2005). Parental attachment, academic achievement, life events and their relationship to alcohol and drug use during adolescence. *Journal of Adolescence*, 28, 665–669.
48. Bahr, S. J., Hoffmann, J. P., and Yang, X. (2005). Parental and peer influences on the risk of adolescent drug use. *Journal of Primary Prevention*, 26, 529–551.
49. Herrenkohl, T. I., Tajima, E. A., Whitney, S. D., and Huang, B. (2005). Protection against antisocial behavior in children exposed to physically abusive discipline. *Journal of Adolescent Health*, 36, 457–465.
50. Kumpfer, K. L., and Turner, C. W. (1990–1991). The social ecology model of adolescent substance abuse: Implications for prevention. *The International Journal of the Addictions*, 25, 435–463.
51. O'Donnell, J., Hawkins, J. D., and Abbott, R. D. (1995). Predicting serious delinquency and substance use among aggressive boys. *Journal of Consulting and Clinical Psychology*, 63, 529–437.

52. Kuntsche, E., and Jordan, M. D. (2006). Adolescent alcohol and cannabis use in relation to peer and school factors: Results of multilevel analyses. *Drug and Alcohol Dependence*, 84, 167–174.
53. Oetting, E. R., and Beauvais, F. (1986). Peer cluster theory: Drugs and the adolescent. *Journal of Counseling and Development*, 65, 17–22.
54. Brook, J. S., Brook, D. W., Arencibia-Mireles, O., Richter, L., and Whiteman, M. (2001). Risk factors for adolescent marijuana use across cultures and across time. *Journal of Genetic Psychology*, 162, 357–374.
55. Stormshak, E. A., Comeau, C. A., and Shepard, S. A. (2004). The relative contribution of sibling deviance and peer deviance in the prediction of substance use across middle childhood. *Journal of Abnormal Child Psychology*, 32, 635–649.
56. McIntosh, J., MacDonald, F., and McKeganey, N. (2005). The reasons why children in their pre and early teenage years do or do not use illegal drugs. *International Journal of Drug Policy*, 16, 254–261.

## Treatment for Youth with Traumatic Stress and Substance Abuse Problems

*“One patient whom I talked to said that she had to lie to be able to get adequate treatment for both disorders. She was told when she went to a PTSD treatment program that she couldn’t have substance abuse or she wouldn’t be able to get treatment—she had to be clean first.”<sup>1</sup>*

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In an ideal world, careful assessment of traumatic stress and substance abuse problems and their effects would be an integral part of the services provided by all agencies and individuals working with adolescents. Each troubled adolescent would receive an individualized treatment plan that took into consideration the links between traumatic stress and substance abuse, and treatment services for each disorder would be integrated and coordinated.

In reality, although much progress has been made in the treatment of both substance abuse and traumatic stress, these fields have grown independently of each other. As a result, despite the clear link between these two clinical areas, very few attempts have been made to integrate the services provided by each group, and each has developed different assessment protocols and treatment approaches.

Few treatment providers are proficient in the multiple areas of need among youth with co-occurring disorders. Substance abuse providers, for example, may not have the tools necessary to identify the impact of trauma exposure, and may not have experience or training in using trauma-informed interventions. Trauma treatment specialists—and mental health providers in general—may overlook signs of increasing substance abuse. They may not have a deep understanding of the process of addiction, or may not be familiar with effective strategies to strengthen

### **Trauma and Substance Abuse: Myths and Facts**

**MYTH:** Available evidence-based assessment tools for trauma or substance abuse are too long and complicated to be implemented in real clinical practice settings.

**FACT:** Many of the older evidence-based assessment instruments do have a reputation for being long and complicated, as well as expensive. However, over the past decade the assessment field has produced many more assessment tools that are accessible and clinician-friendly in terms of both degree of complexity and length.

youths' abilities to reduce use or abstain from substances, and therefore fail to target these problems as a central part of the intervention.

### **Screening and Assessment of Trauma and Substance Abuse**

The signs and symptoms of trauma and substance abuse can at times be hard to spot, especially amidst the turbulent lives of teenagers today. Many of the signs of both trauma and substance abuse are similar to problem behaviors that are part of the natural developmental course of adolescence. For this reason, it may be hard to recognize these problems early.

What *is* evident about this group of teenagers is that they often experience a great deal of distress and need considerable help. Proper assessment of trauma and substance abuse is critical in order to provide adequate care. Therefore, all service providers who have regular contact with adolescents should incorporate screening and assessment instruments that address trauma and substance use into their general intake process.

#### **Clarissa's Story\***

Clarissa was only five years old when her stepfather started sexually abusing her. She lived in a rural town where everyone knew everyone else. Clarissa's neighbors and classmates noticed that she always kept to herself and was usually "on edge." She was very scared that her stepfather would hurt her or her mother if she told anyone about the things he did to her when they were alone. It wasn't until Clarissa turned 11 that a school guidance counselor found out what she was going through. The Department of Social Services was notified, and Clarissa was removed from her parents' home. She went through several foster placements before settling in with an aunt and uncle who lived in a big city in a crowded apartment with many other relatives.

Clarissa started to get into fights with her cousins and would often refuse to participate in activities with her relatives. When she was reprimanded for her failing grades, Clarissa told her aunt that she wished she didn't exist. Her teachers noticed that Clarissa had trouble managing her emotions, often exhibiting deep sadness, irritability, agitation, and/or intense anger. The social worker assigned to the case told her caregivers that he was concerned that Clarissa displayed a lack of regard for her own safety and well-being, as she was getting involved in several risky activities. She was introduced to marijuana at school when she was 13 and quickly progressed to alcohol use, and later to OxyContin.

When she turned 15, Clarissa told her friends that she felt worthless and unimportant. One of the ways she responded to conflict and tensions in the home was by going into her room and making superficial cuts on her arms with a razor blade. Her teachers wondered why she wore long sleeves all the time. Clarissa tried to stay away from home as much as possible, spending a lot of her time with peers in unsafe neighborhoods. On her way back from a party with friends late one night, Clarissa was attacked by a group of teens on the train, but none of her friends tried to help her because they were high at the time. She felt betrayed by her friends, whom she felt hadn't stood up for her. Clarissa was already failing in school, had lost trust in her friends and family, and did not feel that she had anyone to go to. She started considering the possibility of ending her life.

*\*"Clarissa" is a composite based on real teenage clients struggling with traumatic stress and substance abuse.*

Numerous tools are available for the assessment of traumatic stress and of substance abuse. **Table 1** provides information about some well-validated assessment resources. A more comprehensive list of trauma assessment and screening tools can be found at The National Center for Child Traumatic Stress Network’s online Measures Review database ([www.NCTSN.org/measures](http://www.NCTSN.org/measures)).

To optimize assessment accuracy and ensure appropriate treatment, providers should try to incorporate information from multiple sources. Such a multi-faceted approach will help providers generate a treatment plan that is based on complete evaluation of the signs and symptoms of trauma and substance abuse, as well as the degree of functional impairment caused by these problems.

## Treating Youth with Substance Abuse and Traumatic Stress

There is a dearth of research evaluating integrated treatment approaches for youth with substance abuse and traumatic stress problems. However, a review of the adolescent substance abuse treatment literature suggests that traumatized youth do not do well in treatment focusing only on substance use.<sup>7-9</sup>

Adolescents who have experienced trauma and adversity often turn to alcohol and drug use in order to cope with painful emotions. Youth with both substance abuse and trauma exposure show more severe and diverse clinical problems than do youth who have been afflicted with only one of these types of problems. When these problems are treated separately, youth are more likely to relapse and revert to previous maladaptive coping strategies.

Although the research on integrated treatment approaches for this population is limited, there are guidelines that providers can follow to better serve this population. Given the multiple and complex needs of youth with co-occurring traumatic stress and substance abuse problems, several investigators have proposed the following recommendations:<sup>10-13</sup>

- Include assessments of substance abuse problems and traumatic stress as part of routine screening and assessment procedures
- Provide youth and families with more intense treatment options to address the magnitude of difficulties often experienced by this population

### **Trauma and Substance Abuse: Myths and Facts**

**MYTH:** Manualized interventions are too rigid and simplistic to address the complex needs of adolescents suffering from traumatic stress and substance abuse problems.

**FACT:** Most of today’s evidence-based interventions are manual-guided rather than manualized. This distinction reflects a movement away from scripted, inflexible session content and structure and toward a therapeutic model with flexible session content and structure.

**Table 1. Validated Assessment Instruments for Traumatic Stress and Substance Abuse Disorders**

Resource	Brief Description	Source
<p><b>Adquest<sup>2</sup></b> Adolescent Intake Questionnaire<sup>2</sup></p>	<p>This self-report measure allows adolescents to identify various issues of concern, which the therapist can then use to engage adolescents in discussion on a variety of topics including health, sexuality, safety, substance abuse and friends.</p>	<p>Peake, K., Epstein, I., and Medeiros, D. (2005). <i>Clinical and research uses of an adolescent mental health intake questionnaire: What kids need to talk about</i>. Binghamton, NY: The Haworth Press, Inc.</p>
<p><b>CANS-TEA</b> Child and Adolescent Needs and Strengths-Trauma Exposure and Adaptation Version</p>	<p>This clinician-report instrument assesses a variety of domains including trauma history, traumatic stress symptoms, emotional and behavioral regulation (e.g., anxiety, depression, self-harm, substance abuse), environmental stability, caregiver functioning, attachment, child strengths and child functioning.</p>	<p>For information on the guidelines for use and development contact Cassandra Kisiel: (312) 503-0459 c-kisiel@northwestern.edu</p>
<p><b>GAIN</b> Global Appraisal of Individual Needs<sup>3</sup></p>	<p>The GAIN is a series of clinician-administered biopsychosocial assessments designed to provide information useful for screenings, diagnosis, treatment planning, and monitoring progress. Domains measured on the GAIN-Initial (GAIN-I) include substance use, physical health, risk behaviors, mental health, environment, legal and vocational. Several scales are derived from the GAIN-I, including substance problem, traumatic stress, and victimization indices.</p>	<p>Dennis, M., White, M., Titus, J., and Unsicker, J. (2006). <i>Global Appraisal of Individual Needs (GAIN): Administration guide for the GAIN and related measures (Version 5.4.0)</i>. Bloomington, IL: Chestnut Health Systems. Retrieved April 17, 2008, from <a href="http://www.chestnut.org/LI/gain/GAIN_I/GAIN-I_v_5-4/Index.html">http://www.chestnut.org/LI/gain/GAIN_I/GAIN-I_v_5-4/Index.html</a>.</p>
<p><b>TSCC</b> Trauma Symptom Checklist for Children<sup>4</sup></p>	<p>The Trauma Symptom Checklist for Children is a self-rating measure used to evaluate both acute and chronic posttraumatic stress symptoms.</p>	<p>John Briere, Ph.D. Psychological Assessment Services <a href="http://www3.parinc.com/products/product.aspx?Productid=TSCC">http://www3.parinc.com/products/product.aspx?Productid=TSCC</a></p>
<p><b>UCLA PTSD RI for DSM-IV</b> University of California Los Angeles Posttraumatic Stress Disorder Reaction Index<sup>5</sup></p>	<p>This scale is used to screen for exposure to traumatic events and DSM-IV PTSD symptoms. Three versions exist: a self-report for school-age children, a self-report for adolescents, and a parent report. An abbreviated version of the UCLA PTSD RI is also available. This nine-item measure provides a quick screen for PTSD symptoms.</p>	<p>UCLA Trauma Psychiatry Service 300 UCLA Medical Plaza, Ste 2232 Los Angeles, CA 90095-6968 rpynoos@mednet.ucla.edu</p>

Resource	Brief Description	Source
<p>Screening and Assessing Adolescents for Substance Use Disorders: Treatment Improvement Protocol (TIP) Series 31<sup>6</sup></p>	<p>This guide provides information regarding screening and assessment of adolescents with substance use disorders including descriptions of specific assessment instruments.</p>	<p>Substance Abuse and Mental Health Services Administration. (1999). <i>TIP 31: Screening and assessing adolescents for substance use disorders</i>. Rockville, MD U.S. Dept. of Health and Human Services. Retrieved April 18, 2008 from <a href="http://www.ncbi.nlm.nih.gov/books/bv.fcgi?rid=hstat5.chapter.54841">http://www.ncbi.nlm.nih.gov/books/bv.fcgi?rid=hstat5.chapter.54841</a>.</p>
<p><b>POSIT</b> Problem Oriented Screening Instrument for Teenagers</p>	<p>This scale was designed to identify potential problems in need of further assessment, and potential treatment or service needs, in 10 areas including substance abuse, mental health, physical health, family relations, peer relations, educational status, vocational status, social skills, recreation, and aggressive behavior/delinquency.</p>	<p>National Institute on Drug Abuse (NIDA), National Institutes of Health Elizabeth Rahdert, Ph.D., 6001 Executive Blvd, Bethesda, MD, 20892 Email: <a href="mailto:Elizabeth_Rahdert@nih.gov">Elizabeth_Rahdert@nih.gov</a></p>
<p><b>CPSS</b> Child Posttraumatic Stress Disorder Symptom Scale</p>	<p>The CPSS was adapted from the adult Posttraumatic Diagnostic Scale (PTSD). The CPSS is a self-report measure that assesses the frequency of all DSM-IV-defined PTSD symptoms and was also designed to assess PTSD diagnosis. The measure yields a total Symptom Severity score as well as a daily functioning and impairment score.</p>	<p>To obtain the CPSS, contact: Edna Foa, Ph.D. Center for the Treatment and Study of Anxiety University of Penn. School of Medicine Department of Psychiatry 3535 Market Street, Sixth Floor Philadelphia, PA 19104</p>
<p><b>CRAFFT</b></p>	<p>The CRAFFT is a six-item measure that assesses adolescent substance use. The measure assesses reasons for drinking or other substance use, risky behavior associated with substance use, peer and family behavior surrounding substance use, as well as whether the adolescent has ever been in trouble as a result of his or her substance use.</p>	<p>The CRAFFT questions were developed by The Center for Adolescent Substance Use Research (CeASAR). To get permission to make copies of the CRAFFT test, email <a href="mailto:info@CRAFFT.org">info@CRAFFT.org</a>.</p>

- Emphasize management and reduction of both substance use and PTSD symptoms early in the recovery process
- Start relapse prevention efforts—targeting both substance and trauma-related cues—early in treatment (e.g., problem solving, drug refusal, and safety skills and desensitization to trauma reminders)
- Establish a therapeutic relationship that is consistent, trusting, and collaborative
- Focus on stress management skills such as relaxation and positive self-talk
- Help clients develop emotional regulation skills such as the identification, expression, and modulation of negative affect
- Incorporate cognitive restructuring techniques such as recognizing, challenging, and correcting negative cognitions
- Provide social skills training and consider referral to adolescent self-help groups as needed
- Provide psychoeducation for both youth and their families about trauma and substance abuse problems, and encourage parental involvement in treatment with the goal of increasing parenting skills, communication, and conflict resolution
- Make use of school-based treatment programs to reach at-risk youth

For some adolescents, effective treatment may also require random urine drug screens to monitor abstinence from drugs or alcohol, and adjunct psychopharmacologic treatment to relieve acute symptoms of drug withdrawal or traumatic stress.

### **Considering Culture and Context**

It is important to remember that adolescents with co-occurring traumatic stress and substance abuse can belong to any number of cultural communities. Cultural background goes beyond ethnicity and race, and can include identities associated with disability, socioeconomic status, sexual orientation, homelessness, immigration/refugee status, spiritual or religious groups, foster care, and others.

Providing services that are culturally competent lays the foundation for establishing a safe, respectful environment that tells adolescents and families that they are respected and valued. Culturally competent service providers are specially trained in—and are aware and respectful of—the values, beliefs, traditions, customs, and parenting styles of the youths and families they serve. Key characteristics of culturally competent care include:<sup>14,15</sup>

- Understanding and respect for diverse worldviews
- The presence of staff who reflect the cultural diversity of the community served
- Use of interpreter services or, preferably, bilingual providers for clients with limited English proficiency
- Ongoing cultural competency education and training for staff
- Use of linguistically and culturally appropriate educational materials
- A physical environment that reflects the diversity of communities served, including artwork, accessibility, and materials
- Culturally relevant assessments
- Working within the family's defined structure (e.g., the family may include elders or other relatives)
- Understanding and respect for the social mores related to interactions by gender and age

Whatever the cultural or social background of the adolescent, it is important to adopt a “strength-based” approach that capitalizes on individual, family, and contextual factors that can serve to promote healthy coping and adjustment. These factors can include a family’s religious or spiritual beliefs, extended families and available social support networks, positive role models in the community, opportunities for participation in positive recreational, artistic, or academic activities, and adolescents’ built-in capacity to grow and flourish in the midst of adversity.

### ***Special Treatment Considerations When Working with Homeless Youth***

Given the high rates of trauma exposure and substance use among homeless youth<sup>16,17</sup>, it is particularly important to be aware of treatment considerations specific to this population.<sup>18</sup> The lives of homeless youth are often characterized by high levels of personal and environmental instability, including uncertainty about basic needs such as having access to a meal or a place to sleep. Even the most elemental therapeutic processes, such as engaging youth in treatment, and attempting to develop a trusting relationship between the adolescent and service providers, can be quite challenging. In addition, it might also be difficult to safely conduct more involved therapeutic strategies such as exposure-based treatment, particularly when access to environmental supports and the possibility of regular attendance is limited.

For this reason, it is important to prioritize homeless youths’ immediate and primary needs, and to provide access to complementary services that address additional psychosocial needs. Brief interventions employing motivational interviewing<sup>19</sup> as well as skill-based cognitive-behavioral approaches appear to be best suited for this population. These approaches are described in the sections that follow.

## Integrated Treatment Approaches for Adolescents

Although there is strong evidence to support the need for integrated treatment models, there are few treatment models available that address both trauma and substance abuse problems among adolescents. Some of these models are highlighted below:

### **Seeking Safety**

Seeking Safety<sup>20,21</sup> is a manualized treatment for co-occurring substance abuse disorder and PTSD in adults developed by Lisa Najavits, PhD at Harvard Medical School/McLean Hospital. The focus of Seeking Safety is to eliminate or reduce risky or dangerous behaviors, situations, or symptoms, including substance abuse, dangerous relationships, severe psychological symptoms, and self-harm behaviors. The treatment model posits a meaningful connection between past trauma and current self-abusing behaviors, and it utilizes 25 topics or modules divided among cognitive, behavioral, and interpersonal themes that can be selected based on the individual's need.<sup>20</sup>

Applying Seeking Safety to an adolescent population involves minor modifications of the original manual to suit the developmental level of adolescents. Modifications include offering the information verbally if an adolescent refuses to read the handouts, using hypothetical third-person examples to discuss situations, limited parental involvement with the adolescent's permission, and discussing details of the trauma only if the adolescent chooses to do so.<sup>21</sup>

In randomized clinical trials, Seeking Safety has shown significant improvements over treatment as usual in both incarcerated<sup>22</sup> and community<sup>23</sup> adult females. When implemented with adolescent girls, Seeking Safety showed greater improvements than did treatment as usual in substance abuse domains, PTSD cognitions, and levels of deviant behavior, as well as anorexia and somatization ratings.<sup>21</sup>

### **Risk Reduction through Family Therapy (RRFT)**

RRFT is an intervention developed to reduce the risk of substance abuse and other high-risk behaviors, revictimization, and trauma-related psychopathology in adolescents who have been sexually assaulted. RRFT integrates several existing empirically supported treatments, such as Trauma Focused-Cognitive Behavioral Therapy, Multisystemic Therapy, and other risk reduction programs for revictimization and risky sexual behaviors. Adolescents participating in this treatment may be heterogeneous with regard to symptom expression; thus a clinical pathways approach is taken in the RRFT manual. The manual consists of six primary components: Psychoeducation, Coping, Substance Abuse, PTSD, Sexual Education and Decision Making, and Sexual Revictimization and Risk Reduction. A pilot trial of RRFT is currently underway.<sup>24</sup>

### **Trauma Systems Therapy for Substance Abuse in Adolescence**

TST-SA<sup>25</sup> applies Trauma Systems Therapy (TST)<sup>26</sup> to the problem of adolescent traumatic stress and substance abuse, utilizing existing promising practices for treating adolescent substance abuse, traumatic stress, and emotional regulation problems.

The application of TST to adolescent substance abuse includes several modifications to the existing intervention. Motivational interviewing strategies are included to engage youth in treatment and to establish a commitment to change. Additionally, parents and teens are provided with psychoeducation about substance abuse and its interaction with symptoms of traumatic stress.

This approach incorporates a strong emphasis on behavior management strategies for parents to utilize in order to increase monitoring and appropriate limit setting, particularly around drug use and high-risk behaviors. The model also incorporates substance abuse treatment strategies such as parent-teen communication skills, recognizing and planning for substance abuse cues or trigger situations, cognitive and interpersonal problem-solving techniques, and other relapse-prevention techniques. Careful attention is given to the connection between substance abuse and the negative emotions associated with the experience of trauma. In addition, youth learn skills to manage emotions, behavior, and substance abuse cravings. An open trial of TST-SA is currently underway.

### **Trauma-Focused Interventions for Adolescents**

Several successful treatment programs have been developed or adapted from adult models to help adolescents process traumatic memories and manage distressing feelings, thoughts, and behaviors. These empirically supported manuals are described in detail below.

#### **Trauma-Focused Cognitive Behavioral Therapy (TF-CBT)**

TF-CBT is a short-term individual treatment that involves sessions with the youth and parents as well as parent-only sessions. TF-CBT is for youth aged 4 to 18 who have significant behavioral or emotional problems related to traumatic life events, even if they do not meet the full diagnostic criteria for PTSD.<sup>27</sup> Utilizing weekly clinic-based, individual treatment, TF-CBT helps youth process traumatic memories and manage distressing feelings, thoughts, and behaviors. TF-CBT also uses joint parent and youth sessions to provide parenting and family communication skills training. Compared to a nondirective supportive therapy, sexually abused youth aged 8 to 15 treated with TF-CBT demonstrated significantly greater improvement on levels of anxiety, depression, and dissociation at six-month follow up. Youth treated with TF-CBT also showed a significant improvement in PTSD symptoms and dissociation at 12-month follow-up.<sup>28</sup> Online training for TF-CBT is currently available at <http://tfcbt.musc.edu>.

### ***Cognitive-Behavioral Intervention for Trauma in Schools (CBITS)***

CBITS is an intervention program for youth exposed to traumatic events, which can be delivered on school campuses by school-based clinicians. It was developed in collaboration with the Los Angeles Unified School District for students and their families. CBITS utilizes individual and group sessions to teach youth relaxation techniques and social problem-solving skills, as well as how to challenge upsetting thoughts and process traumatic memories. CBITS also includes a parent and teacher psychoeducation component. In a randomized controlled trial comparing this intervention with a three-month wait-list condition, those receiving CBITS reported lower PTSD, depression, and psychological dysfunction symptom scores after three months.<sup>29</sup>

### ***Structured Psychotherapy for Adolescents Responding to Chronic Stress (SPARCS)***

SPARCS is a group intervention specifically designed to address the needs of chronically traumatized adolescents who may still be living with ongoing stress, are currently experiencing stress, and are experiencing problems in areas of functioning such as impulsivity, affect regulation, self-perception, dissociation, relations with others, somatization, and struggles with their own purpose and meaning in life. The 16-session program can be provided in a variety of settings, including school, outpatient, and residential, and incorporates components of three existing interventions. These components include mindfulness, interpersonal, and emotion regulation skills derived from Dialectical Behavior Therapy for Adolescents<sup>30</sup>, problem-solving skills from Trauma Adaptive Recovery Group Education and Therapy (TARGET)<sup>31</sup>, and social support enhancement and skills for planning for the future from the School Based Trauma/Grief Group Psychotherapy.<sup>32</sup>

### ***Trauma Systems Therapy (TST)***

Developed at the Center for Medical and Refugee Trauma at Boston Medical Center<sup>33</sup>, TST acknowledges the complexity of the social environment that surrounds an individual, and the ways in which disruptions in one area of the social ecology may create problems in another. The social ecological model of human behavior—in which the contexts of family, school, peer group, neighborhood, and culture all interact with an individual's development<sup>34</sup>—is applied to youth exposed to traumatic stress, who often live in environments characterized by child maltreatment, parental illness and substance abuse, and domestic violence. TST interventions are designed to work in two dimensions: strategies that operate through and within the social environment to promote change, and strategies that enhance the individual's capacity to self-regulate their emotions.

The TST model involves choosing a series of interventions that correspond to the fit between the traumatized youth's own emotional regulation capacities and the ability of the youth's social environment and system-of-care to help him or her manage emotions or to protect him or her from threat. TST begins with an assessment of both the youth's

level of emotional regulation and the degree of environmental stability in the youth's world. Preliminary data from an open trial of TST demonstrate a significant reduction of trauma symptoms and increased emotional regulation skills among youth, as well as a more stable social environment, after three months of treatment.<sup>33</sup> A controlled trial of TST is currently in progress.

## **Substance Abuse Interventions for Adolescents**

Several successful treatment programs have been developed or adapted from adult models in order to focus on the unique cognitive changes, developmental transitions, and peer and family issues that typically occur during adolescence. Treatments for adolescents incorporate these developmental considerations in different ways. Described below are the current approaches utilized within various types of interventions, as well as empirically supported treatment manuals available for substance-abusing adolescents in an outpatient setting.

### ***Brief Interventions***

Interventions that are of shorter duration and less extensive than more traditional substance abuse treatments can be appealing to consumers, service providers, and managed care providers. These treatments have the overarching goal of addressing and enhancing the motivation to change problem behaviors, as well as providing skills to meet these goals. Generally, brief interventions contain between one and five sessions and can be delivered virtually anywhere by a variety of professionals. Two of the most widely used brief intervention approaches include cognitive-behavioral therapy and motivational interviewing.

### **Cognitive-Behavioral Therapy (CBT)**

Cognitive-behavioral models, based on social learning theory, conceptualize substance use and related problems as learned behaviors that are initiated and maintained in the context of environmental factors. This treatment approach incorporates the principle that unwanted behavior can be changed by clear demonstration of the desired behavior, and consistent reward of incremental steps toward achieving it. CBT may incorporate emotional exposure to internal cues in order to inoculate individuals against future relapse. Therapeutic activities include completing specific assignments, rehearsing desired behaviors, experiencing imagined and real exposures to emotions and situations to enhance emotional tolerance, and recording and reviewing progress. Praise and privileges are given for meeting assigned goals. This model can be implemented via individual sessions as well as within a group treatment approach. According to research studies, individual and group CBT can help adolescents become drug free and increase their ability to remain drug free after treatment ends.

### **Motivational Interviewing (MI)**

This treatment approach involves using specific interviewing and discussion techniques to enhance the individual's motivation to change their problematic behavior. MI pertains to both a style of relating to the client as well as to the therapeutic techniques that facilitate the process. Its main tenets include: 1) taking an empathetic, nonjudgmental stance while listening reflectively, 2) developing discrepancy, rolling with the client's resistance, and avoiding argumentation, and 3) supporting self-efficacy for change. Motivational interviewing has been found to significantly reduce drinking and driving in teens with initial low motivation to change.

### **Motivational Enhancement Therapy and Cognitive Behavioral Therapy for Cannabis Users**

The Cannabis Youth Treatment Collaborative developed an empirically tested five-session treatment manual that combines the motivational interviewing treatment approach and cognitive behavioral therapy. The treatment consists of two initial individual sessions designed to increase the adolescent's motivation to deal with their drug use, followed by three group CBT sessions designed to help adolescents develop skills useful for stopping or reducing marijuana use. This brief therapy has been proven effective in reducing marijuana use in adolescents. There is also an option for therapists to utilize an additional seven-session CBT component to provide additional skills training. The complete manuals for both the brief five-session treatment as well as the extended treatment with 12 CBT sessions are available at: <http://www.chestnut.org/LI/cyt/products/>.

### ***Family-Based Therapies***

Family-based treatment is the most thoroughly studied treatment modality for adolescent substance use. Considerable research underscores the influential role played by family relationships and family environments in the development of adolescent alcohol and drug problems. The more thoroughly researched family approaches are outlined below.

### **Multidimensional Family Therapy (MDFT)**

This is an outpatient family-based drug abuse treatment for teenagers. MDFT views adolescent drug use in terms of a network of influences (made up of individual, family, peer, and community) and utilizes this network to reduce unwanted behavior and increase desirable behavior in different settings. Treatment includes individual and family sessions held in the clinic, in the home, or with family members at family court, school, or other community locations.

### **Multidimensional Family Therapy for Adolescent Cannabis Users**

This manual-based treatment integrates family therapy and substance-abuse treatment and has been proven effective with a cannabis-using adolescent population. The treatment

focuses on the adolescent and the parents, as well as on patterns of family interaction, both within the family and with other systems such as schools, courts, and other support networks. The manual is available at: <http://www.chestnut.org/LI/cyt/products/>.

### **Brief Strategic Family Therapy (BSFT)**

This intervention is used to treat adolescent drug use that occurs with other problem behaviors such as conduct problems, oppositional behavior, delinquency, associating with antisocial peers, aggressive and violent behavior, impaired family functioning, and risky sexual behavior. BSFT is a family systems approach based on the premise that the drug-using adolescent is displaying problem behaviors that are indicative of what is going on within the family system. BSFT holds the principle that patterns of interaction in the family influence the behavior of the adolescent. The role of the BSFT counselor is to plan interventions that carefully target and provide practical ways to change the patterns of interaction (e.g., failing to establish rules and consequences) that are directly linked to the adolescent's drug use.

### **Brief Strategic Family Therapy for Adolescent Drug Abuse**

The National Institute of Drug Abuse has made an online version of the BSFT manual available at: <http://www.nida.nih.gov/TXManuals/bsft/BSFT2.html>.

### **Multisystemic Therapy (MST)**

This treatment approach targets multiple systems that contribute to the development of delinquent behavior in adolescents, including family, peers, school, and the neighborhood. MST is tailored to each individual's needs and may include individual, family or marital therapy, peer group counseling, and case management. Services are provided within the adolescent's natural environment, such as the home or school, which facilitates both the application to and the maintenance of treatment gains in the "real world." MST also helps adolescents and their families develop social support networks through such means as making connections with extended family or religious communities. MST has been shown to significantly reduce adolescent drug use during treatment and for at least six months after treatment. More information regarding the MST approach is available online at: <http://www.mstservices.com/text/treatment.html>.

### ***Community-Based Interventions***

Community-based interventions provide mental health services within the normal environment of an individual or population. Service sites may include the home, school, or other neighborhood settings, which increases access to care for underserved populations, particularly for individuals who do not have the resources to travel to specialty clinics. Because teenagers are influenced by many aspects of their environment (such as family,

peers, teachers, cultural norms), community interventions often take place across a number of settings to maximize the social ecological validity of the intervention and to support practice of skills learned in treatment. Community interventions may target specific individuals who have already begun to display high-risk behaviors—such as drug and alcohol abuse, delinquent behavior, and unsafe sexual behaviors—or they may target select groups who may be at greater risk for engaging in these behaviors—such as athletes who are at greater risk for steroid use and teenagers who live in a community with a lot of gang violence. In many community interventions, a social support component for adolescents and their parents is important and may decrease the likelihood of relapse. Three interventions for adolescents displaying high-risk behaviors, which include a community-based component, are described below:

### **Adolescent Community Reinforcement Approach (ACRA)**

This treatment approach recognizes the powerful role the environment plays in encouraging or discouraging drug use. It attempts to rearrange environmental contingencies to make substance use a less rewarding behavior. ACRA blends an operant model with a social systems approach to teach teens new ways of handling life's problems without drugs or alcohol. It focuses on the interpersonal interaction between individuals and those in their communities. ACRA teaches adolescents when and where to implement the techniques learned in treatment as well as how to build on positive reinforcements and use existing community resources that will support positive change. ACRA also guides adolescents in developing a positive support system.

### **The Adolescent Community Reinforcement Approach for Adolescent Cannabis Users**

This 14-session treatment model consists of 10 individual sessions with the youth, two sessions with one or two caregivers, and two sessions with both the youth and caregiver(s). This treatment uses functional analyses to identify triggers for drug use as well as other prosocial activities that compete with drug use, skills training in a variety of areas including relapse prevention, and the “Happiness” scale to monitor progress. The manual is available online at: [http://www.chestnut.org/LI/cyt/products/ACRA\\_CYT\\_v4.pdf](http://www.chestnut.org/LI/cyt/products/ACRA_CYT_v4.pdf).

### **Student Assistance Program (SAP)**

This substance abuse intervention is a school-based program for identifying, assessing, and treating students with alcohol and/or substance abuse problems. There are more than 1,500 student assistance programs in the country; however, these programs vary widely. For example, some SAPs refer all identified alcohol and drug users to clinics for treatment, while other programs bring trained clinicians to the school to provide intervention on-site. The most effective school-based substance abuse interventions are empirically guided and manualized, and focus on providing psychoeducation and skills training to adolescents. In

addition, effective programs enforce school-wide policies regarding alcohol and drug use. Preliminary analyses of certain programs suggest that adolescents who participate in SAPs can show reduced substance use.

### **The Residential Student Assistance Program (RASP)**

RASP is a residential substance abuse prevention program for high-risk adolescents, modeled after the Westchester Student Assistance Model. More information is available at: <http://www.sascorp.org/residesap.htm> or <http://www.sascorp.org>.

## **Psychiatric Care and Psychotropic Medication**

The commonalities between posttraumatic stress disorder and substance use disorders suggest that pharmacotherapies targeting a specific neurotransmitter or neuroendocrine system might be particularly beneficial.<sup>35</sup> An important goal of pharmacotherapies for this population is to decrease PTSD symptoms so that the adolescent does not utilize substances of abuse in order to distance himself/herself from the traumatic event. Some antidepressants have been shown to improve the intrusive and depressive symptoms of PTSD. Furthermore, standard pharmacotherapeutic treatments for substance abuse disorders may be useful for individuals with co-occurring PTSD. Integration of pharmacotherapy and psychotherapy may be beneficial in order to maximize treatment outcomes in this population.

### ***For More Information on Treatment Options for Substance Abuse, see***

- Substance Abuse and Mental Health Services Administration (SAMHSA) Model Programs  
<http://modelprograms.samhsa.gov/>
- Society for Adolescent Substance Abuse Treatment Effectiveness (SASATE)  
<http://www.chestnut.org/LI/APSS/SASATE/>
- The National Institute of Drug Abuse (NIDA)  
<http://www.nida.nih.gov>
- The National Institute on Alcohol Abuse and Alcoholism (NIAAA)  
<http://www.niaaa.nih.gov>

## References

1. Cavalcade Productions. (1998). *A video series on substance abuse treatment: Trauma and substance abuse*. Nevada City, CA: Cavalcade Productions, Inc. Retrieved April 12, 2008, from <http://www.cavalcadeproductions.com/substance-abuse-treatment.html>.
2. Peake, K., Epstein, I., and Medeiros, D. (2005). *Clinical and research uses of an adolescent mental health intake questionnaire: What kids need to talk about*. Binghamton, NY: The Haworth Press, Inc.
3. Dennis, M., White, M., Titus, J., and Unsicker, J. (2006). *Global Appraisal of Individual Needs (GAIN): Administration guide for the GAIN and related measures (Version 5.4.0)*. Bloomington, IL: Chestnut Health Systems. Retrieved April 17, 2008, from [http://www.chestnut.org/LI/gain/GAIN\\_I/GAIN-I\\_v\\_5-4/Index.html](http://www.chestnut.org/LI/gain/GAIN_I/GAIN-I_v_5-4/Index.html).
4. Briere, J., Johnson, K., Bissada, A., Damon, L., Crouch, J., Gil, E., et al. (2001). The Trauma Symptom Checklist for Young Children (TSCYC): Reliability and association with abuse exposure in a multi-site study. *Child Abuse Negl*, 25(8), 1001–14.
5. Steinberg, A. M., Brymer, M. J., Decker, K. B., and Pynoos, R. S. (2004). The University of California at Los Angeles Post-traumatic Stress Disorder Reaction Index. *Curr Psychiatry Rep*, 6(2), 96–100.
6. Substance Abuse and Mental Health Services Administration. (1999). *TIP 31: Screening and assessing adolescents for substance use disorders*. Rockville, MD U.S. Dept. of Health and Human Services. Retrieved April 18, 2008 from <http://www.ncbi.nlm.nih.gov/books/bv.fcgi?rid=hstat5.chapter.54841>.
7. Funk, R. R., McDermeit, M., Godley, S. H., and Adams, L. (2003). Maltreatment issues by level of adolescent substance abuse treatment: The extent of the problem at intake and relationship to early outcomes. *Child Maltreat*, 8(1), 36–45.
8. Titus, J. C., Dennis, M. L., White, W. L., Scott, C. K., and Funk, R. R. (2003). Gender differences in victimization severity and outcomes among adolescents treated for substance abuse. *Child Maltreat*, 8(1), 19–35.
9. Grella, C. E., and Joshi, V. (2003). Treatment processes and outcomes among adolescents with a history of abuse who are in drug treatment. *Child Maltreat*, 8(1), 7–18.
10. Back, S., Dansky, B. S., Coffey, S. F., Saladin, M. E., Sonne, S., and Brady, K. T. (2000). Cocaine dependence with and without post-traumatic stress disorder: A comparison of substance use, trauma history and psychiatric comorbidity. *Am J Addict*, 9(1), 51–62.
11. Giaconia, R. M., Reinherz, H. Z., Paradis, A. D., and Stashwick, C. K. (2003). Comorbidity of substance use disorders and posttraumatic stress disorder in adolescents. In Oimette, P., and Brown, P. J. (Eds.), *Trauma and substance abuse: Causes, consequences, and treatment of comorbid disorders* (pp. 227–242). Washington, DC: American Psychological Association.
12. Oimette, P., & Brown, P. J. (Eds.). (2003). *Trauma and substance abuse: Causes, consequences, and treatment of comorbid disorders*. Washington, DC: American Psychological Association.

13. Cohen, J. A., Mannarino, A. P., Zhitova, A. C., and Capone, M. E. (2003). Treating child abuse-related posttraumatic stress and comorbid substance abuse in adolescents. *Child Abuse Negl*, 27(12), 1345–65.
14. Anderson, L. M., Scrimshaw, S. C., Fullilove, M. T., Fielding, J. E., and Normand, J. (2003). Culturally competent healthcare systems. A systematic review. *Am J Prev Med*, 24(3 Suppl), 68–79.
15. Cross, T., Bazron, B., Dennis, K., and Isaacs, M. (1999). *Toward a culturally competent system of care*. Washington, DC: Georgetown University Child Development Center.
16. Gwadz, M. V., Nish, D., Leonard, N. R., and Strauss, S. M. (2007). Gender differences in traumatic events and rates of post-traumatic stress disorder among homeless youth. *J Adolesc*, 30(1), 117–29.
17. Johnson, K. D., Whitbeck, L. B., and Hoyt, D. R. (2005). Substance abuse disorders among homeless and runaway adolescents. *Journal of Drug Issues*, 35(4), 799–816.
18. Thompson, S. J., McManus, H., and Voss, T. (2006). Posttraumatic Stress Disorder and substance abuse among youth who are homeless: Treatment issues and implications. *Brief Treatment and Crisis Intervention* 6(3), 206–217.
19. Baer, J. S., Peterson, P. L., and Wells, E. A. (2004). Rationale and design of a brief substance use intervention for homeless adolescents. *Addiction Research and Theory*, 12(4), 317–334.
20. Najavits, L. (2001). *Seeking Safety: A treatment manual for PTSD and substance abuse*. New York, NY: The Guilford Press.
21. Najavits, L. M., Gallop, R.J., and Weiss, R. D. (2006). Seeking safety therapy for adolescent girls with PTSD and substance use disorder: A randomized controlled trial. *J Behav Health Serv Res*, 33(4), 453–63.
22. Zlotnick, C., Najavits, L. M., Rohsenow, D. J., and Johnson, D. M. (2003). A cognitive-behavioral treatment for incarcerated women with substance abuse disorder and posttraumatic stress disorder: Findings from a pilot study. *J Subst Abuse Treat*, 25(2), 99–105.
23. Hien, D. A., Cohen, L. R., Miele, G. M., Litt, L. C., and Capstick, C. (2004). Promising treatments for women with comorbid PTSD and substance use disorders. *Am J Psychiatry*, 161(8), 1426–32.
24. Danielson, C. (2006). *Risk Reduction Through Family Therapy treatment manual*. Charleston, SC: National Crime Victims Research & Treatment Center.
25. Suarez, L., Saxe, G., Ehrenreich, J., and Barlow, D. (2006). *Trauma Systems Therapy for Substance Abuse in Adolescence* (Unpublished). Boston, MA: Center for Anxiety and Related Disorders, Boston University.
26. Saxe, G., Ellis, B., and Kaplow, J. (2006). *Collaborative treatment of traumatized children and teens: The trauma systems therapy approach*, 1st ed. New York, NY: The Guilford Press.

27. Cohen, J., Mannarino, A., Berliner, L., and Deblinger, E. (2000). Trauma-focused cognitive behavioral therapy for children and adolescents: An empirical update. *Journal of Interpersonal Violence, 15*, 1202–1223.
28. Cohen, J. A., Mannarino, A. P., and Knudsen, K. (2005). Treating sexually abused children: 1 year follow-up of a randomized controlled trial. *Child Abuse Negl, 29*(2), 135–45.
29. Stein, B. D., Jaycox, L. H., Kataoka, S. H., Wong, M., Tu, W., Elliott, M. N., et al. (2003). A mental health intervention for schoolchildren exposed to violence: A randomized controlled trial. *JAMA, 290*(5), 603–11.
30. Wagner, E., Rathus, J., and Miller, A. (2006). Mindfulness skills in dialectical behavior therapy. In Baer, R. (Ed.), *Mindfulness-based treatment approaches: Clinician's guide to evidence base and applications*. Burlington, MA: Elsevier, Inc.
31. Ford, J. D., and Russo, E. (2006). Trauma-focused, present-centered, emotional self-regulation approach to integrated treatment for posttraumatic stress and addiction: Trauma Adaptive Recovery Group Education and Therapy (TARGET). *Am J Psychother, 60*(4), 335–55.
32. Layne, C., Pynoos, R., Saltzman, W., Arslanagic, B., Savjak, N., and Popovic, T. (2001). Trauma/grief focused group psychotherapy: School based postwar intervention with traumatized Bosnian adolescents. *Group Dynamics: Theory, Research, and Practice, 5*, 277–290.
33. Saxe, G., Ellis, H., Fogler, J., Hansen, S., and Sorkin, B. (2005). Comprehensive care for traumatized children: An open trial examines treatment using Trauma Systems Therapy. *Psychiatric Annals, 35*(5), 443–448.
34. Bronfenbrenner, U. (1979). Contexts of child rearing: Problems and prospects. *American Psychologist, 34*, 844–850.
35. Brady, K., Back, S., and Coffey, S. (2004). Substance abuse and posttraumatic stress disorder. *Current Directions in Psychological Science, 13*, 206–209.

*“Assisting adolescents to reflect on their current situation and experiences and helping them to envision a positive future may promote motivation to change, especially among those who have ‘been there, done that’ and are willing to look ahead.”*

Janet C. Titus, Susan H. Godley, and Michelle K. White  
*A Post-Treatment Examination of Adolescents’ Reasons for  
Starting, Quitting, and Continuing the Use of Drugs and Alcohol*

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To successfully identify and treat adolescents with traumatic stress and substance abuse, clinicians must continually explore better ways to encourage their participation in treatment. This is particularly important in mental health and substance abuse service systems, where these teens present a unique set of challenges.

Adolescents with both traumatic stress and substance abuse often have complex histories and numerous additional problems that make them particularly difficult to treat. Although empirically-based treatment interventions offer adolescents a good chance of success in overcoming a variety of psychological problems, many youth fail to obtain treatment, and those who enter treatment often terminate prematurely.

Clinicians who work with adolescents encounter a series of challenges when trying to engage youth who have histories of traumatic stress and substance abuse. Most adolescents do not enter treatment voluntarily and are often apprehensive about the process. Furthermore, **substance abusing adolescents, much like their adult counterparts, often have a hard time making positive changes in their use patterns.** To provide effective services, these challenges and barriers must be addressed.

## Identifying and Encouraging Youth to Seek Help

Teens tend not to seek out professional help for a variety of reasons. They may not believe they need help. They often are not aware of the range of services available. They may be concerned about the stigma of obtaining mental health services or hesitant to seek out an adult for assistance. Researchers and clinicians have developed a variety of ways to overcome these initial hurdles.

### **Offer multiple types of assistance**

Teens are far more likely to seek assistance for problems with employment, relationships, and family than they are for mental health or emotional issues like posttraumatic stress or substance abuse. Agencies that can act as resource centers and offer a variety of services that might be sought by teens themselves are more likely to be in a position to help an adolescent with multiple problems, including those related to trauma and/or substance abuse.

### **Identify youth in schools**

Schools are a key access point for early identification of at-risk youth. Outreach can be conducted in school using peer networks, standardized screening programs, or a combination of the two.

Peer networks utilize student leaders who have been trained to provide assistance to at-risk teens. By making use of in-school student support resources, clinicians are more likely to identify youth who would otherwise not have approached an adult for treatment. Programs that employ peer support networks should provide close adult supervision to peer supporters and have counselors readily available to provide assistance to at-risk youth identified by their peer supporters.

At-risk students can also be identified through screenings and evaluations conducted in school or after-school settings. Clinicians administering annual or semiannual mental health or substance abuse screenings at a school can help

### **Brenda's Story\***

Brenda, a 16-year-old mother of a 10-month-old boy, was mandated to treatment after a marijuana-related arrest. Born into a chaotic family, Brenda has lived at various times with her mother, her father, and other family members; she now spends most of her time with the father of her son at his parents' home.

Brenda began drinking and smoking marijuana when she was 10. At age 12, she began selling marijuana and other drugs and became involved in a loosely organized gang. She has attended school only sporadically since she was 14 years old.

Illegal substances were common in the environment where Brenda was raised. Both of Brenda's parents have been intermittent users of heroin and other drugs, and her father spent a significant amount of time in jail during Brenda's childhood. Brenda was sexually assaulted by an adult friend of her father's at age nine. Brenda prided herself on never using heroin, and on "just" using marijuana and alcohol. Even the occasional use of cocaine was of very little concern either to her or to most of the important figures in her personal life.

Brenda is a watchful, cautious, strong-willed, and outwardly confident girl. She speaks quietly about feeling old, feeling responsible for her younger siblings and her son, and about feeling disillusioned with the world, particularly with her father. Attending school, following the rules, and meeting the expectations that are typical for girls her age hold little meaning for her, and she has few dreams for her future. She is highly suspicious of other people's intentions, and experiences a sense of profound interpersonal distance. It is not likely that Brenda would have entered treatment without having been mandated by the court.

*\*"Brenda" is a composite representation based on real teenage clients struggling with traumatic stress and substance abuse.*

identify youth who would not have sought treatment or otherwise been identified, thus facilitating youths' engagement in treatment or services.

Many schools screen their adolescent students for substance abuse problems using the CRAFFT questionnaire, a brief (six-item) screening test that can identify adolescents who are engaged in risky behaviors with alcohol or drugs.<sup>1-3</sup> Programs that employ the Cognitive-Behavioral Intervention for Trauma in Schools (CBITS) have also successfully screened large numbers of students for traumatic stress within high school populations. (For more information on screening tools, see *Treatment for Youth with Traumatic Stress and Substance Abuse Problems*.)

## Getting Adolescents in the Door

No-show rates for initial sessions at substance abuse clinics are reported at about 50%.<sup>4</sup> Factors associated with missed appointments include active substance abuse, young age, and antisocial behavior. Listed below are some of the ways clinicians can increase the likelihood that an adolescent will attend the first session and continue coming thereafter:

- **Make reminder calls.** Call the adolescent's home prior to the appointment and speak with both the youth and a parent. Tell them that you look forward to meeting them. Discuss the importance of arriving at the sessions on time; mention a couple of success stories with previous clients, and ask about any obstacles to attendance they anticipate
- **Be especially welcoming at the first session.** Praise the teen and family for just making it to the first session
- **Be culturally aware and sensitive.** When engaging youths—and especially their caregivers—from diverse backgrounds, it is essential to be aware of cultural values and expectations that guide social interaction, mental health/substance abuse treatment, and salient themes in their communities. Establishing the trust of youths and families from diverse backgrounds is an important factor in determining whether they will continue to show up for appointment, and the quality of the initial interaction will greatly influence this decision. If any staff members are unaware of the cultural backgrounds of the youths and families they are likely to assist, make sure they receive training in cultural competence; this will greatly contribute to successful treatment engagement and delivery (For more on this topic, see *Treatment for Youth with Traumatic Stress and Substance Abuse Problems*.)
- **Reach out to the family.** Make an intense outreach effort starting with the very first session. Obtain several ways to get in touch with the youth and the family and

get contact information for those involved in their care. Make follow-up phone calls, letting them know that you care and that you want to continue to see them. This is particularly important for adolescents who are mandated for treatment

## Engaging Homeless Youth

Drug use by homeless youth is reported to be double that of youth in school.<sup>5</sup> Furthermore, **homeless adolescents who abuse substances engage in more high-risk behaviors, are more resistant to treatment, and have higher rates of psychopathology and family problems than substance-using adolescents who are not homeless.** While engaging this overlooked population in treatment is particularly important, it is also an especially challenging endeavor. Homeless youth are very unlikely to self-refer to treatment and, as they are frequently not in touch with caregivers, are rarely referred by motivated family members who may have otherwise initiated treatment. Although shelters are the primary intervention for these adolescents, many are not equipped to provide treatment for the multiple areas of need and diverse co-occurring conditions characterizing this population. Strategies to engage substance-abusing homeless adolescents and their families in treatment include:<sup>6</sup>

- **Stay “at their level” when making the first contact.** Showing the adolescent that you understand his or her language and culture will facilitate engagement. Let him or her know that you are knowledgeable about the issues faced by many homeless adolescents, such as a history of abuse
- **Present treatment options in a non-threatening, appealing manner.** Avoid asking personal questions, and stress that teens similar to him or her have participated in and benefited from the program
- **Avoid blaming.** Reframe current situations (e.g., drug behavior, living in a shelter) in terms of relational factors rather than personal failure
- **Convey hope and empowerment.** Communicate that change is possible and that the teen will have control over his or her participation in treatment
- **Respect his or her concerns,** such as those surrounding confidentiality or engaging primary caregivers, and being open to negotiation

## Addressing Practical Barriers to Care

Many adolescents encounter real barriers to accessing treatment, and it is sometimes necessary to provide guidance and assistance to help parents, caregivers, and adolescents overcome them.

### ***Scheduling***

Both parents and adolescents may have difficulty with scheduling appointments. If a family is working with other treatment team members, try to coordinate with these members to schedule as many appointments as possible on the same day, so that the family has to make only one trip to your location. Discuss the possibility of holding sessions before or after usual business hours to enable families to schedule appointments around work and school commitments.

### ***Transportation***

Discuss with the youth and family any potential obstacles they might have to getting to appointments regularly. Whenever possible, offer to provide bus or transit passes if your center is near public transportation.

### ***Address child care limitations***

Families may have young children to care for and may not be able to afford child care during family sessions or parent sessions. If your agency has access to volunteers, ask them to assist with child care while parents are in session.

### ***Address caregivers' treatment issues***

Caregivers may need referrals for treatment themselves. Providing independent referrals for caregiver treatment may help to alleviate stress on a family.

## **Getting Families Involved**

Adolescents whose caregivers are involved and engaged in treatment are more likely to have better outcomes than those whose caregivers do not believe that treatment will help and/or who are unwilling to work with treatment providers.<sup>7</sup> Specific strategies for involving families in treatment include:

- **Foster family motivation.** Determine what changes each family member would most like to see and incorporate those changes into treatment goals to increase the family's motivation and engagement
- **Validate parents.** Validate parents' past and ongoing efforts to help their adolescent
- **Acknowledge parental stress.** Acknowledge parents' stress and sense of burden (both as parents and as individuals)
- **Be an ally for the parent.** In addition to trying to manage their teen's emotional and behavioral problems, parents are often overwhelmed by difficulties in their own lives. Be sure to provide active support and guidance

- **Provide education about the nature of mental health problems.** Families may prefer to see their adolescent's symptoms solely as a medical and/or behavioral problem, and not as a mental health problem. In the case of substance abuse, for example, families may believe that once the adolescent is sober, all emotional and/or behavioral problems will disappear. Psychoeducation regarding the nature of substance abuse and emotional problems may help family members better understand their adolescent's issues
- **Address complex family dynamics.** Adolescents often come to treatment with complex family backgrounds. It is important to identify the family members and/or caretakers who have legal custody and practical influence over treatment-related decisions. It is also important to identify others who are most likely to be involved in an adolescent's care day to day, including close friends and mentors who might support the adolescent's successful engagement in treatment. Be particularly sensitive to situations in which an adolescent does not live with a biological parent

## Building Alliances

As with any treatment, it is important that youth and caregivers feel that their clinician is an ally. This includes having a set of common goals. The entire family must believe that their work with the clinician and participation in treatment will lead to improvement in issues that are important to them.

- **Establish rapport, set clear boundaries, and allow for autonomy.** Many adolescents do not respond to an intervention that they perceive as being imposed upon them, whether by a clinician, parents, or other authority figures. Regardless of the specific treatment approach, it is essential to get to know the adolescent in the beginning of treatment and develop a solid working relationship. It is also essential to outline a framework for the therapeutic relationship that establishes clear boundaries but also allows the adolescent to make autonomous decisions
- **Find out what the adolescent wants to talk about.** Although adolescents may be reluctant to disclose details about their risky behavior, there are ways to encourage meaningful conversations that will lead to open discussion about what is going on in their lives. These strategies include:
  - Showing genuine interest in—and respect for—his or her unique interests, concerns, and worldview
  - Demonstrating understanding of his or her culture
  - Offering guidance that addresses the adolescent's life problems as he or she perceives them

### ***Informing youth about normal behavior***

Teenagers benefit from contrasting their behavior with that of the average person their age. A 13-year-old who believes that “everyone gets drunk sometimes” may be surprised to learn, for example, that the majority of 8th-graders have never been drunk.<sup>8</sup> It is crucial to provide teens with information that clarifies the difference between recreational use and problematic use (including abuse or dependence).

### ***Using appropriate assessment tools***

Administering assessment instruments that aren’t face-to-face tends to encourage greater disclosure. Adolescents tend to provide more information on topics such as substance abuse and suicidal ideation when they aren’t talking to a clinician. For example, clinicians can use the Adolescent Questionnaire (Adquest), an 80-item self-report measure that includes questions about health, sexuality, safety, substance abuse, and friends, designed to open up many areas of interest and engage the adolescent in conversations involving these topics.<sup>9</sup> (See *Treatment for Youth with Traumatic Stress and Substance Abuse Problems* for more on this and other assessment resources.)

### ***Discussing the limits of confidentiality***

To build trust with an adolescent, discuss the limits of confidentiality at the start of treatment and plan with the adolescent specifically how information will be communicated to parents and other authority figures. Stick to your agreement! There is no surer way to lose the trust of an adolescent than by sharing information without the adolescent’s awareness. Reassure the adolescent that if you must disclose information (e.g., if someone’s life is in danger), you will make every effort to tell him/her before you do it.

### ***Employing Motivational Interviewing***

Motivational interviewing (MI) has been shown to be effective at reducing alcohol and substance use in adolescents with an initial low motivation to change.<sup>10</sup> Although it is not possible to address the full scope of MI in this abbreviated format, some of the main principles include:

- Taking an empathetic, nonjudgmental stance and listening reflectively. This involves attempting to understand teenagers’ perspectives and helping them feel understood, so that they can be more open and honest with others
- Identifying how the adolescents’ current behavior may affect their goals. This involves working with adolescents to identify personally meaningful goals, and helping them to evaluate whether what they are doing now will interfere with where they want to be in the future

- Rolling with resistance. Rather than arguing with teens when they hit a roadblock, help them develop their own solutions to the problems that they have identified
- Supporting self-efficacy for change. The belief that change is possible is an important motivator for successful change. Help adolescents to be hopeful and confident about their ability to impact their own future in a positive way

### ***Leaving the door open***

When adolescents want to terminate treatment, make sure they know that they can come back at any time. Experienced treatment providers know that often it takes awhile for an adolescent to start coming in regularly.

### **Enhancing Community Awareness**

Community members often interact with teens, but they often do not have the training to identify and understand youth at risk. To improve community awareness, substance abuse professionals and mental health providers should make every effort to provide community groups with information about the symptoms associated with substance abuse and traumatic stress, as well as information about factors that can increase or mitigate the risk of these disorders. Arming the community with this knowledge will be useful in identifying and treating youth in need, as well as in preventing future difficulties.

It is also critical to provide community member with links to help. This includes information regarding hotlines to call when a person suspects that a child or adolescent is being abused, contacts for guidance during a crisis, and referrals for meeting additional youth and family needs.

## References

1. Knight, J. R., Shrier, L. A., Bravender, T. D., Farrell, M., Vander Bilt, J., and Shaffer, H. J. (1999). A new brief screen for adolescent substance abuse. *Arch Pediatr Adolesc Med*, 153(6), 591–6.
2. Knight, J. R., Sherritt, L., Shrier, L. A., Harris, S. K., and Chang, G. (2002). Validity of the CRAFFT substance abuse screening test among adolescent clinic patients. *Arch Pediatr Adolesc Med*, 156(6), 607–14.
3. Jull, A. (2003). The CRAFFT test was accurate for screening for substance abuse among adolescent clinic patients. *Evid Based Nurs*, 6(1), 23.
4. Lerman, P., and Pottick, K. (1995). *The parents' perspective: Delinquency, aggression, and mental health*. New York, NY: Gordon and Breach Science Publishers.
5. Forst, M., and Crim, D. (1994). A substance use profile of delinquent and homeless youths. *Journal of Drug Education*, 24, 219–231.
6. Slesnick, N., Meyers, R. J., Meade, M., and Segelken, D. H. (2000). Bleak and hopeless no more. Engagement of reluctant substance-abusing runaway youth and their families. *J Subst Abuse Treat*, 19(3), 215–22.
7. Dakof, G., Tejada, M., and Liddle, H. (2001). Predictors of engagement in adolescent drug abuse treatment. *Journal of the American Academy of Child and Adolescent Psychiatry*, 40, 274–281.
8. Johnston, L. D., O'Malley, P. M., Bachman, J. G., and Schulenberg, J. E. (2007). *Monitoring the Future: National results on adolescent drug use: Overview of key findings, 2006*. Bethesda, MD: National Institute on Drug Abuse. Retrieved April 16, 2008 from <http://www.monitoringthefuture.org/pubs/monographs/overview2006.pdf>.
9. Peake, K., Epstein, I., and Medeiros, D., Eds. (2005). *Clinical and research uses of an adolescent mental health intake questionnaire: What kids need to talk about*. Binghamton, NY: The Haworth Press, Inc.
10. Miller, W., and Rollnick, S. (2002). *Motivational interviewing: Preparing people for change*. 2nd ed. New York, NY: Guilford Press.

