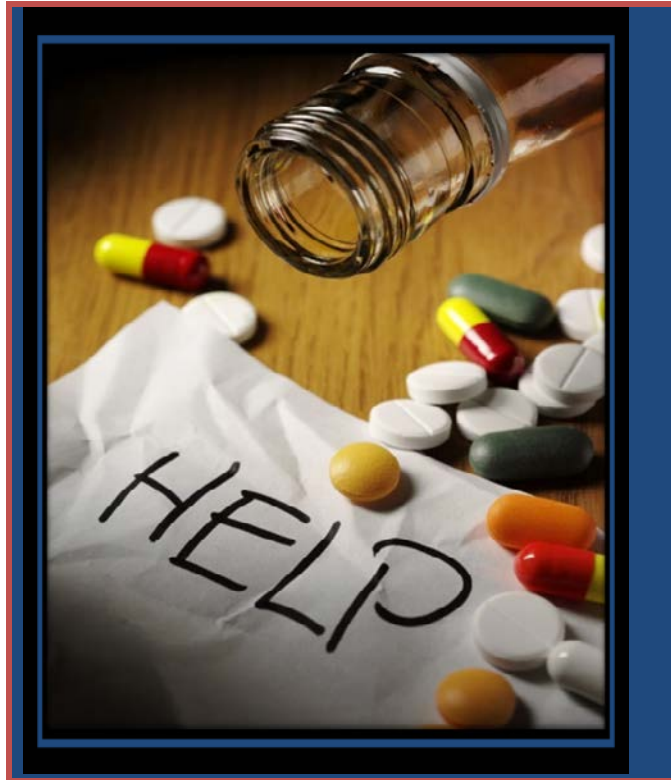


**TN**

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8/15/2016

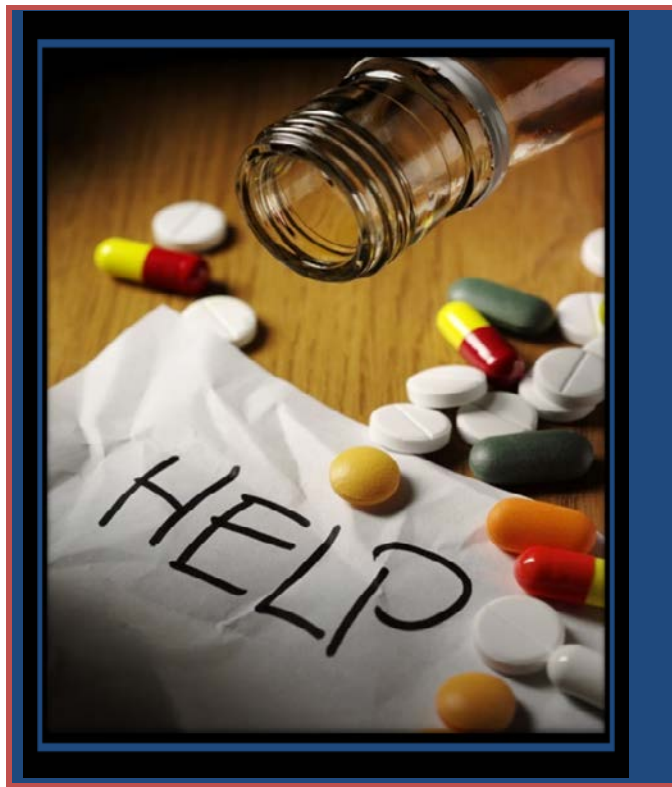
# Substance Use Best Practice Tool Guide

Division of Clinical Leadership in Collaboration with the  
Division of Substance Abuse Services

Authored by: Edwina Chappell



Department of  
**Mental Health &  
Substance Abuse Services**



8/15/2016

## **Substance Use Best Practice Tool Guide**

### **INTRODUCTION**

Division of Clinical Leadership in Collaboration with the  
Division of Substance Abuse Services

## Disclosures

*No  
pharmaceutical  
funding was used  
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Persons with a hearing or speech disability should dial 711 for access to Telecommunications Relay Services (TRS). This will allow them to use text telephone (TTY) or another device to call persons with or without such disabilities. ***In the event of an emergency***, TTY users should call 911 directly.

## Acknowledgments

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DEPARTMENT OF MENTAL HEALTH AND SUBSTANCE ABUSE SERVICES

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E. DOUGLAS VARNEY  
COMMISSIONER

August 2016

Dear Reader:

The Tennessee Department of Mental Health and Substance Abuse Services' (TDMHSAS) Division of Clinical Leadership, in collaboration with the Division of Substance Abuse Services, takes great pleasure in presenting its first *Substance Use Best Practice Tool Guide*. The document is replete with information and resources, and emphasizes evidence-based practices in the field. Aligned with initiatives of the Substance Abuse and Mental Health Services Administration (SAMHSA), the tool guide is designed to:

- Increase awareness and understanding of substance use;
- Promote the use of best practices for individuals with substance use disorders, including co-occurring disorders;
- Encourage innovative and improved practice in the field;
- Enhance capacity that will result in stronger communities; and
- Develop expertise around substance use issues for an array of audiences.

Substance use issues constitute a significant challenge for our state and our nation. As such, substance use continues to be an equal opportunity destroyer, affecting individuals from all income levels, geographic areas, racial groups and ethnicities, ages, and genders<sup>1</sup>. Substance use does not discriminate. It intersects with, and contributes to, many of the challenges that we face as a state and a nation, including poverty, mental illness, school failure, criminal activity, and a number of health problems<sup>2</sup>. This best practice tool guide aims to promote knowledge, wholeness, and recovery.

Sincerely,

A handwritten signature in black ink, appearing to read "E. Douglas Varney", with a long, sweeping horizontal line extending to the right.

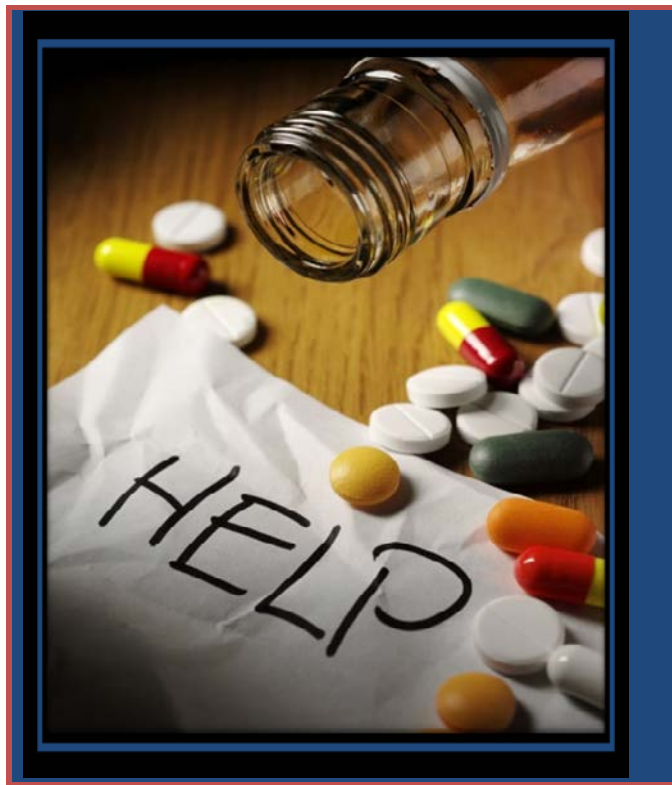
E. Douglas Varney  
Commissioner

<sup>1</sup>National Institute on Drug Abuse (NIDA). (n.d.). Faces of addiction. Retrieved on November 14, 2014, from <http://archives.drugabuse.gov/about/welcome/aboutdrugabuse/faces/>.

<sup>2</sup>Zobeck, T. (2014, March 7). How much do Americans really spend on drugs each year? Retrieved on March 14, 2014 from <http://www.whitehouse.gov/blog/2014/03/07/how-much-do-americans-really-spend-drugs-each-year>.



Department of  
**Mental Health &  
Substance Abuse Services**



8/15/2016

**Substance Use Best Practice Tool  
Guide**

**DEFINING SUBSTANCE  
USE DISORDERS**

Division of Clinical Leadership in Collaboration with the  
Division of Substance Use Services

## **Defining Substance Use Disorders**

Substance use (SU) is a more comprehensive term than drug use that encompasses not only use of drugs, but excessive or illegal use or misuse of any substance. Many of the substances being excessively, illicitly, or inappropriately used had their legal acceptability stripped as information regarding their unpleasant and/or dangerous effects were amassed. Some substances retained their legal status but carry warning labels about their deleterious side effects. Some substances have always been illegally produced and marketed, only available on the black market. Many legal substances are traded on the black market as well (Casey, 1978). Resources such as the Diagnostic and Statistical Manual, Fifth Edition (DSM-5) and the Treatment Episode Data Set (TEDS) are commonly used to define substance use disorders (SUDs). The DSM-5 manual provides the standard classification of behavioral health disorders for professionals across the country (American Psychiatric Association Web site, n.d.; NIDA, 2014). It focuses on diagnoses. TEDS, on the other hand, is an admissions-based system.

### **Diagnostic and Statistical Manual (DSM)-5: Substance Use Disorders (SUDs) Classifications**

As the standard classification of mental disorders, including substance-related disorders, the intent of the DSM was to be applicable in a wide array of contexts and for use by diverse clinicians and researchers of many different orientations (e.g., psychodynamic, biological, behavioral, cognitive, interpersonal, or family/systems). This most recent version, the DSM-5, has been designed for use across clinical settings (outpatient, inpatient, partial hospital, clinic, private practice, primary care, and consultation-liaison), with community populations. It can be used by a wide range of health and behavioral health professionals, including psychiatrists and other physicians, psychologists, nurses, social workers, occupational and rehabilitation therapists, and counselors. The DSM is also a necessary tool for collecting and communicating accurate public health statistics (American Psychiatric Association Web site, n.d.). The fifth edition of the Diagnostic and Statistical Manual (DSM-5) includes a wealth of changes to definitions of psychiatric disorders, including substance-related disorders. For example, there is no more distinction between abuse and dependence in the DSM-5 (American Psychiatric Association, 2013; Grohol, 2013). The categories of substance abuse and substance dependence were combined into a single overarching disorder known as substance use disorders (SUDs) (MDHS/ADAD, 2013). Moreover, the threshold for substance use disorders (SUDs) is now at least two (2) criteria. In the DSM-IV-TR, one or more criteria were required for a diagnosis of abuse and at least three (3) criteria were necessary for a diagnosis of dependence. Craving (a strong desire/urge to use a substance) was added as a criterion and “recurrent legal problems” was deleted. In addition, criteria for SUDs are accompanied by criteria for intoxication. Polysubstance dependence, caffeine use disorder\*, and the physiological subtype have also been deleted. (\*Caffeine use disorder is included in Section III of the DSM-5 so that further research to support it as a clinically significant disorder is encouraged.) Cannabis withdrawal and caffeine withdrawal were added as new diagnoses. Severity was defined by three (3) categories: mild (two to three criteria); moderate (four to five criteria); and severe (at least six criteria). Even the title for the disorder was expanded to include addictive disorders (American Psychiatric Association, 2013;

Grohol, 2013). However, this discussion will focus solely on SUDs and omit substance-induced disorders and addictive disorders.

Substance use disorders (SUDs) per the DSM-5 comprise a cluster of physiological, cognitive, and behavioral symptoms which indicate an individual continues to use a substance despite substantial substance-related problems. A salient feature of SUDs is the underlying change in brain pathways that may continue to be evident well after detoxification, particularly when the SUD is severe. The diagnosis of SUD can be applied to nine (9) classes of drugs: 1) Tobacco; 2) Cannabis; 3) Inhalants;

---

**A salient feature of SUDs is the underlying change in brain pathways that may continue to be evident well after detoxification, particularly when the SUD is severe (American Psychiatric Association, 2013).**

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4) Stimulants; 5) Opioids; 6) Alcohol; 7) Hallucinogens; 8) Sedatives, hypnotics, and anxiolytics; and 9) Other/Unknown substances. These substances may be obtained over the counter, by prescription, and/or illegally. Behavioral effects of brain changes from use of these substances may become manifest in repeated relapses, as well as intense drug cravings, when people with SUD are

exposed to substance-related stimuli (American Psychiatric Association, 2013).

Criterion A, which encompasses four (4) groupings, contains the primary behaviors to be considered in relation to use of the substance. These groupings address impaired control, social impairment, risky use, and pharmacological criteria. Criteria 1-4 cover impaired control over substance use, Criteria 5-7 focus on social impairment, Criteria 8-9 deal with risky use of the substance, and Criteria 10-11 constitute pharmacological criteria. It should be noted that withdrawal symptoms vary significantly across the classes of substances so separate criteria sets for withdrawal are provided for each class. Clinicians are also admonished not to count symptoms of withdrawal and tolerance that occur during appropriate medical treatment involving prescribed medications when diagnosing an SUD (American Psychiatric Association, 2013).

## **Tobacco Use Disorders (TUDs).**

In the DSM-5, tobacco use disorders (TUDs) are displayed under the heading Tobacco-Related Disorders. These disorders are common in persons who use smokeless tobacco and cigarettes daily. The disappearance of nausea and dizziness after repeated intake, along with more intense effect of tobacco the first time it is used during the day, exemplifies tolerance to the substance. For many persons with the disorder, tobacco relieves or helps with avoidance of withdrawal symptoms that may occur after stopping use. Cravings are often reported when individuals do not smoke for several hours. Some individuals spend excessive amounts of time using tobacco, as can be evidenced by chain-smoking. There are also times when individuals forego important occupational, social, or recreational activities because they take place in tobacco use-restricted areas. Persons with TUD rarely fail to fulfill major role obligations such as work or home responsibilities, and neither do they spend inordinate amounts of time trying to procure tobacco. They may have persistent interpersonal or social problems or engage in use that is physically hazardous, e.g., smoking in bed



or around flammable materials. Those who endorse these criteria may have a more severe TUD (American Psychiatric Association, 2013).

Cigarettes comprise the most commonly used tobacco product, representing more than 90 percent of nicotine/tobacco use. In the United States, slightly more than one fifth of adults are current cigarette smokers, less than five percent use smokeless tobacco, and less than one percent engage in tobacco use in cigars and pipes. Among adults 18 years of age and older, the 12-month prevalence of nicotine prevalence (DSM-IV) is 13 percent, with similar rates across gender. Prevalence of current nicotine dependence is higher among Native American and Alaska Natives than among Whites (23 percent versus 14 percent). Lower prevalences are found for African Americans (10 percent) and Asian Americans/Pacific Islanders and Hispanics (six percent each).

Experimentation involving tobacco use typically begins in adolescence and around 20 percent are smoking at least monthly by the age of 18 years. A majority of these individuals, though, become daily tobacco users. Moreover, a large portion of persons have met current TUD criteria by late adolescence. While more than 80 percent attempt to quit at some time, 60 percent relapse within a week. Further less than five percent are able to remain abstinent for life. Persons with externalizing personality traits such as young people with conduct disorder or adults with anxiety disorder are more likely to initiate tobacco use, as well as continue use and develop TUD. It appears that persons with low educational levels and low incomes are more likely to begin tobacco use and less likely to quit. There is also a genetic component to TUD (American Psychiatric Association, 2013).

Medical consequences of tobacco use typically shows up when users are in their 40s, becoming progressively more debilitating over time. Most of the medical conditions result from exposure to tars, carbon monoxide, and other non-nicotine components of tobacco. Fifty percent of smokers who fail to quit will die early from a tobacco-related illness. Present evidence suggests that long-term use of nicotine medications do not cause medical harm (American Psychiatric Association, 2013).

## **Cannabis Use Disorders.**

The DSM-5 lists this disorder under the heading Cannabis-Related Disorders. It includes problems associated with substances derived from the cannabis plant and synthetic compounds that are chemically similar. The concentrated extraction known as hashish is also included. The potency of cannabis varies greatly, ranging from one to 15 percent in usual cannabis plant material 10 to 20 percent in hashish. However, a steady increase in potency has been observed in seized cannabis over the last 20 years. Sometimes cannabis use disorder is the sole diagnosis involving cannabis users. Frequently, though, cannabis use disorders (CUD) show up concurrently with other substance use disorders, e.g., alcohol use disorder, etc.). When polysubstance use is involved, symptoms related to cannabis use may be minimized. People who report using cannabis persistently typically report behavioral and pharmacological tolerance to most effects,

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**Frequently cannabis use disorders show up concurrently with other substance use disorders, e.g., alcohol use disorder, etc. (American Psychiatric Association, 2013).**

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though tolerance is lost when cannabis use is stopped for at least several months, e.g. (American Psychiatric Association, 2013).

Some individuals with CUD spend many hours each day under the influence while use throughout the day may take place over a period of months or years for others. Even those who use less frequently may still experience recurrent problems related to school, work, family, and other important activities. A common feature of CUD includes arguments with parents or significant others over the use of cannabis in the home or in the presence of children that result in impaired family functioning. Moreover, persons with CUD may keep using despite knowing about the psychological and physical problems linked with its use.

Often noted is the fact that cannabis use contributes to the worsening of symptoms in persons diagnosed with other mental disorders as well as other increased psychological and/or physiological problems such as difficulty sleeping, change in mood, etc. Also some users of cannabis resort to minimization of the frequency and/or amount of their use, so it is extremely important to be cognizant of common symptoms and signs pointing to the disorder. Similar to other substances, experienced cannabis users develop pharmacological and behavioral tolerance, making it difficult to detect when they are indeed under the influence. Nevertheless, signs of acute and chronic use comprise yellowing of finger tips, chronic cough, red eyes, odor from the substance on clothing, the burning of incense, and exaggerated impulse/craving for certain foods, sometimes at strange times of the day or night (American Psychiatric Association, 2013).

Without a doubt, cannabinoids, and particularly cannabis, are the most widely used illegal psychoactive substances in the United States. The 12-month prevalence rate is about 1.5 percent among adults at least 18 years of age and 3.4 percent among 12-to-17-year olds. Rates are higher among males than females across adults and young people. As expected, the highest 12-month prevalence rates are for 18 to 29 year olds, with the lowest rates for persons 65 years of age and older. For adults, Native Americans and Alaska Natives demonstrate the greatest 12-month prevalence (3.4 percent). Rates are also highest among Native Americans and Alaska Natives (7.1 percent) for 12-to-17-year olds (American Psychiatric Association, 2013).

Onset of CUD happens most frequently during adolescence or young adulthood. Cannabis use disorder (CUD) typically develops over time, where pervasive patterns show gradual increases in amount and frequency. Among one of the first substances that young people try, the belief that cannabis is not as harmful as tobacco or alcohol likely contributes to its increased use. Moreover, it has been suggested that trends in onset rates be regularly re-evaluated in light of use and availability of “medical marijuana”. Clearly the best predictor of CUD is early onset cannabis use (i.e., use before the age of 15 years). This early use correlates highly with externalizing behaviors, especially conduct disorder (American Psychiatric Association, 2013).

The distinction between problematic and nonproblematic use of cannabis can be extremely difficult to make, especially when people report using a variety of substances, including cannabis. It is also true that acute adverse reactions to cannabis should be distinguished from the symptoms of major depressive disorder, bipolar disorder, delusional disorder, panic disorder, or schizophrenia. Chronic cannabis use can lead to a lack of motivation that resembles dysthymia. Of course, urine tests can be helpful in making the diagnosis (American Psychiatric Association, 2013).

Synthetic marijuana, otherwise known as Spice, K2, Skunk, or Moon Rocks, has been soaring in popularity in recent years. It has been marketed as a safer alternative to traditional marijuana, but the drug is dangerous and can be deadly. Since 2009, these drugs have killed more than one thousand Americans, many of them high school students. The psychoactive ingredients in synthetic marijuana bind to the brain's CB1 receptors and are very likely to cause everything from seizures to psychosis because of its potency (Brodwin, 2015).

The Drug Enforcement Administration (DEA) in the United States Department of Justice issued a statement prohibiting the production, possession, and sale of any of the five different chemicals that are used to produce fake marijuana. This action also made byproducts such as K2 and Spice illegal. Makers of synthetic marijuana frequently and rapidly change up the specific ingredients and produce the drug in such massive quantities, making drug enforcement tough (Brodwin, 2015).

## **Inhalant Use Disorders (IUDs).**

Inhalant-Related Disorders is the header that captures Inhalant Use Disorder (IUD) in the DSM-5. Inhalants can be defined as chemical vapors that individuals inhale on purpose to get “high” (NIDA for Teens, 2012). The National Survey on Drug Use and Health (NSDUH), administered to persons 12 years of age and older regarding their use of specific substances in the past month as well as the past year, defines inhalants as ‘liquids, sprays, and gases that people sniff or inhale to get high or to make them feel good.’ These substances are legal, harmless when used as intended, and found in many typically used products such as glue and spray paint (The NSDUH Report, March 2014). Many problems associated with the use of other substances can be manifested in inhalant use. Mild withdrawal and tolerance are each reported by close to 10 percent of people who use inhalants. Among adults reporting previous episodes of anhedonia or low mood, inhalant use disorder (IUD) is associated with past suicide attempts (American Psychiatric Association, 2013).

When all Americans 18 years of age and older are considered, prevalence for IUD is 0.02 percent. It increases to 0.1 percent for persons in the 18-29 year-old age group and nears one half of one percent for American youth ages 12-17 years. IUD in adults includes almost no females and is comprised of predominantly European Americans. In adolescents, prevalence is highest in Native Americans. Prevalence of IUD declines after adolescence, often remitting in early adulthood (American Psychiatric Association, 2013). Adolescent trends showed encouraging rates of decline between 2002 and 2012. In fact, past year inhalant use among 12- to 17-year-olds has been on the

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**IUD in adults includes almost no females and is comprised of predominantly European Americans (The NSDUH Report, 2014).**

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decline since 2006. Moreover, 2012 reflected the lowest rate in any year from 2002. Rates for male adolescents (12 to 17 years) also showed statistically significant declines compared to the 2011 rate (The NSDUH Report, 2014).

Among the most commonly used inhalants for 12 to 17 year olds include shoe polish, glue, gasoline, and spray paints. Nearly 20 percent of the young people who use inhalants develop IUD. Call to poison centers for intentional abuse of inhalants tend to spike for people around 14 years of age. If the IUD extends into adulthood, there are typically severe

problems for the individual, including suicidal ideation with attempts, antisocial personality disorder, and SUDs (American Psychiatric Association, 2013).

There are numerous signs and symptoms that may lead clinicians to consider the “IUD” diagnosis. In some instances, criteria for inhalant use disorder cannot be met, i.e., less than two criteria are present. Moreover, symptoms associated with IUD can manifest while using other substances, especially sedating substances such as alcohol, barbiturates, etc., hence making it difficult to diagnose the inhalant use disorder (IUD). Further, people with IUD may present with symptoms of neoplastic, metabolic, infectious, or toxic disorders that impair peripheral or central nervous system function or disorders that have damaged other organs such as renal damage. It should be noted that individuals can show inhalant intoxication and use without meeting criteria for IUD. However, IUD should not be considered as a diagnosis when there has been continuous/repeated exposure to inhalants but history or individual reports do not support intentional inhalant use (American Psychiatric Association, 2013).

In general, people with IUD who are receiving clinical care have many other substance use disorders. In adults, IUD typically co-occurs with antisocial personality disorder. Comorbidity in adolescents is linked to conduct disorder (American Psychiatric Association, 2013).

## Stimulant Use Disorders.

The header Stimulant-Related Disorders includes stimulant use disorders (StUDs) in the DSM-5. Amphetamine and amphetamine-type stimulants as well as substances with similar effects though structurally different (e.g., methylphenidate) fall under the category of StUDs. The substances are most often taken through the mouth or intravenously, but other routes of administration might also be used. Tolerance develops with repeated use; however, onset of StUDs tends not to be overly rapid (e.g., within a week). Violent or aggressive behavior tends to be common when high doses are taken.

Higher-dose use may also be linked to the psychotic episodes and paranoid ideation that resemble schizophrenia as well as anxiety that resembles generalized anxiety disorder or panic disorder.

People with StUD commonly develop conditioned responses to substance-related stimuli, e.g., craving at the sight of any white powderlike substance. It is these responses that contribute to relapse, are extremely hard to quench, and continue well after detoxification (American Psychiatric Association, 2013).

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People with StUD commonly develop conditioned responses to substance-related stimuli, e.g., craving at the sight of any white powderlike substances (American Psychiatric Association, 2013).

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As with many SUDs, prevalence rates for StUDs of the amphetamine type are highest in Native Americans and Alaska Natives (0.6 percent) among adults. On the other hand, Whites and African Americans demonstrate the highest prevalence rates (0.3 percent) among 12 to 17 year olds. Prevalence rates for cocaine-based StUDs tend to show similar patterns. Native Americans demonstrate the highest rates (0.8 percent) for adults. For 12 to 17 year olds, Hispanics, Whites,

Pacific Islanders tend to exhibit comparable rates (0.2 percent). Surprisingly, StUD involving cocaine is virtually nonexistent for adolescent Native Americans and Alaska Natives. Regardless the type of StUD, 12-month prevalence rates are higher among young adults in the 18 to 29 year age range (American Psychiatric Association, 2013).

Stimulant use disorders (StUDs) occur at all levels of society. However, first regular use (based on data from individuals in treatment) tends to occur around 23 years of age. The average age increases to 31 years for primary methamphetamine treatment admissions (American Psychiatric Association, 2013). Use tends to be related to the perceived need for performance enhancement at work, athletics, or school or for weight control. Chronic daily use can involve low or high doses, but higher dosages tend to accompany longer periods of use. StUD develops more rapidly and takes on greater severity when the stimulants are taken intravenously or smoked (American Psychiatric Association, 2013).

In particular, the effects of stimulants should be distinguished from the symptoms of generalized anxiety disorder, panic disorder, schizophrenia, and depressive/bipolar disorders. The clinical picture of StUDs can also look like intoxication with phencyclidine or synthetic ‘designer drugs’. Often StUDs co-occur with other SUDs involving substances with soporific properties. Users of amphetamine-type stimulants generally use cannabis while cocaine users prefer alcohol. StUD can be linked to gambling disorder, antisocial personality disorder, attention-deficit/hyperactivity disorder, and posttraumatic stress disorder. Persons seeking treatment for cocaine-related problems many times present with cardiopulmonary problems, with the most common being chest problems (American Psychiatric Association, 2013).

Synthetic stimulants are on the rise as substances of use/misuse, especially in areas throughout Florida, Ohio, Texas, and Tennessee. The schedule I controlled substance,  $\alpha$ -PVP ( $\alpha$ -pyrrolidinovalerophenone) and known on the street as “flakka” or “gravel”, is the new culprit. The drug can be eaten injected, snorted, or vaporized in e-cigarettes. It is easily purchased over the Internet and has been nicknamed “\$5 insanity” because it’s cheap and precipitates bizarre behaviors in its users. User experiences range from hallucinations, paranoia, agitation, and bizarre behaviors to delusions of extraordinary strength. When delirious the user may become a danger to others as well as to himself/herself. He/she will usually vigorously struggle, with consequences including seizures, arrhythmias, and death. That is why healthcare providers and law enforcement have been admonished to be cautious when restraining individuals that have used this drug (McMillen, 2015). Users refer to flakka as “meth on steroids” (Little, 2015).

Bath salts or synthetic cathinones are another amphetamine-like stimulant. Many of the behaviors reported with flakka are associated with bath salts. These drugs are typically taken orally, inhaled, or injected. The worst outcomes have been linked to snorting the drug or through needle injection. Furthermore, these drugs contain a lot of unknown ingredients (NIDA, 2012b). In our country, bath salts have been linked to an alarming number of visits to emergency departments and/or calls to poison control centers (NIDA, 2012b; RxList, 2013).

## **Opioid Use Disorders.**

These disorders are shown under the header Opioid-Related Disorders in the DSM-5 (American Psychiatric Association, 2013). Opioids are medications used to eliminate pain. Substances such as

codeine, hydrocodone, oxycodone, and morphine fall within this drug class (NIDA, 2013). Opioids are often purchased on the illicit market but may also be obtained via prescription. In some cases, the prescription is legitimate but in other cases, prescriber name and/or dosage amount have been altered. Opioid Use Disorders (OUDs) comprise signs and symptoms of prolonged, compulsive self-administration of opioids that are used in doses much larger than needed for a particular medical condition or for which there is no legitimate medical use purpose. Withdrawal tends to

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It has been reported that the increased (opioid) abuse coincides with the availability of high purity heroin and the controversial campaign against the undertreatment of pain (Preda, 2014).

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accompany abrupt discontinuation of opioids (American Psychiatric Association, 2013).

Use and abuse of opioids have risen markedly in our country. It has been reported that the increased (opioid) abuse coincides with the availability of high-purity

heroin and the controversial campaign against the undertreatment of pain. The problem is dramatically illustrated by the following statistics.:

Americans consume:

- Approximately **80** percent of the world's opioid supply but comprise less than **five** percent of the world's population.
- **99** percent of the world's hydrocodone supply.
- About **67** percent of the world's illicit drugs (Preda, 2014).

Prevalence rates tend to be higher for males than females, 3 to 1 for opioids involving heroin and 1.5 to 1 for opioids excluding heroin. However, female adolescents have a greater likelihood of developing OUDs than males. Community 12-month prevalence rates for adults (at least 18 years of age) are almost 0.4 percent. The rates are lower among adolescents in the community population (ages 12-17). Overall, the rate for adolescents is around 1.0 percent, with rates for heroin use substantially lower (less than 0.1 percent). Prevalence of OUD tends to decrease with age, though there is overrepresentation among adult Native Americans (1.25 percent). It should be noted that 12-month prevalence rates for OUDs may be underestimated because of the high number of persons with the disorder that are incarcerated (American Psychiatric Association, 2013).

OUD typically becomes problematic in the late teens or early 20s (American Psychiatric Association, 2013). Two thirds of teens and young adults who use prescription opioids get them from

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Two thirds of teens and young adults who use prescription opioids get them from family and friends, often for free when sharing medication or without their families or friends knowing (NSDUH, 2011).

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family and friends, often for free when sharing medication or without their families or friends knowing (NSDUH, 2011). In general, OUD continues for many years once developed, despite brief periods of abstinence. Relapse following abstinence is quite common, even in treated populations. Only about 20 to 30 percent of persons with OUD demonstrate long-term abstinence. Military service personnel are the exception. For example, better than 90 percent of the opioid users that served in the military in Vietnam achieved abstinence after they returned home. Unfortunately, many of these military service personnel also experienced increased rates of amphetamine or alcohol consumption use disorder, along with elevated rates of suicidality. Early death and symptom remission after 40 years of age contribute to the decrease in prevalence in later years. Nevertheless, many persons with OUD continue to meet criteria for the disorder for decades (American Psychiatric Association, 2013).

Unlike most other substances of abuse, opioids are less likely to produce symptoms of mental disturbance. Viral (e.g., hepatitis C virus, HIV, etc.) and bacterial infections are commonly associated with OUDs, especially when the substances are injected. Persons with OUD are further at risk for the development of mild to moderate depression (e.g., dysthymia), at minimum, as well as the more severe major depressive disorder (MDD). Individuals with OUD also have insomnia. Antisocial personality disorder occurs with greater frequency in persons with OUD as well as posttraumatic stress disorder. A history of conduct disorder in youth is a significant marker for OUD in adulthood (American Psychiatric Association, 2013).

## **Alcohol Use Disorders.**

Alcohol use disorders (AUDs) are found under the heading Alcohol-Related Disorders in the DSM-5. They are associated with problems related to other substances, in most instances, because alcohol is either used to substitute for the other substances when they are not available or to assuage the unwanted effects of the other substances. Repeated intake of high doses of alcohol especially affects the gastrointestinal tract, the central and peripheral nervous systems, and the cardiovascular system. There is also an increased rate of completed suicide and suicidal behavior in persons with these disorders (American Psychiatric Association, 2013).

There are three flavors of the disorder--mild, moderate and severe, and a total of 11 possible symptoms associated with the disorder. Two symptoms are necessary for the disorder to be classified as mild, four symptoms must be present for a moderate specifier, and at least six symptoms are needed to achieve a severe specifier. Persons showing tolerance and withdrawal are presenting with a mild alcohol use disorder. If individuals drink only in a binge-like manner such that tolerance and withdrawal do not develop to a level that either can be counted, the presentation falls in the moderate range. Binge-like drinking where tolerance and withdrawal are counted results in a more severe presentation of the disorder (Gitlow, 2013).

Not surprising, alcohol use disorder (AUD) is a very common disorder. The 12-month prevalence in the United States is estimated to be 8.5 percent among adults at least 18 years of age and 4.6 percent among 12-to-17-year olds. Rates are higher among adult men than adult women and lowest among persons at least 65 years of age. For adults, Native Americans and Alaska Natives demonstrate the greatest 12-month prevalence (12.1 percent). Rates are highest among Hispanics

and Native Americans and Alaska Natives (6.0 percent and 5.7 percent respectively) for 12-to-17-year olds American Psychiatric Association, 2013).

AUD has a variable course. A person may decide to stop drinking, likely in response to a crisis, with weeks of abstinence and limited periods of controlled/nonproblematic drinking. However, consumption is likely to escalate once drinking is resumed and severe problems will again re-appear. In young people, conduct disorder typically co-occurs with AUD (American Psychiatric Association, 2013).

Differential diagnosis of AUD includes nonpathological use of alcohol; sedative, hypnotic, or anxiolytic use disorder; and conduct disorder in childhood /adult antisocial personality disorder. Schizophrenia, antisocial personality, and bipolar disorders are linked to markedly increased rate of AUD. Depressive disorders and several anxiety disorders are also possibly related to AUD (American Psychiatric Association, 2013).

## **Hallucinogen-Related Disorders, Specifically Phencyclidine Use Disorders.**

Under hallucinogens, this section will focus specially on phencyclidine use disorders (PUDs). Substances associated with PUDs consist of phencyclidine (often referred to as angel dust or PCP) as well as less potent, similarly acting compounds such as cyclohexamine, dizocilpine, and ketamine. Showing up as street drugs in the 1960s, these substances produced feelings of separation from the body and mind in low doses, and coma/stupor at higher doses. PUDs take eight (8) days or more to be totally eliminated from the body. However, the hallucinogenic effects may last for weeks in certain individuals and episodes resembling schizophrenia may become persistent (American Psychiatric Association, 2013).

Prevalence estimates for phencyclidine use disorder (PUD) are less firm than for other substances. Nearly 2.5 percent of the population reports ever using phencyclidine. Rates range from less than 0.5 percent for adolescents 12 to 17 years old to about 3.0 percent for adults at least 26 years of age. A spike occurred in past-year use and ever used categories for 12<sup>th</sup> graders. It should also be noted that persons admitted to substance use treatment facilities with phencyclidine as their primary substance tended to be younger and less educated than admissions for other

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**Persons admitted to substance use treatment facilities with phencyclidine as their primary substance tended to be younger and less educated than admissions for other substance use (American Psychiatric Association, 2013).**

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substance use. Moreover, admissions with phencyclidine as the primary are more likely found in the Northeast and West region of the United States (American Psychiatric Association, 2013).

It will be important to distinguish the effects of phencyclidine from those of other substances. However, phencyclidine is often an additive to substances such as cocaine and cannabis. In addition, it will be paramount that clinicians be able to discern whether behaviors associated with



other psychiatric disorders occurred before the intake of phencyclidine (American Psychiatric Association, 2013).

## **Sedative, Hypnotic, and Anxiolytic Use Disorders.**

Sedative, hypnotic, and anxiolytic use disorders (SHAUDs) are displayed under the header Sedative-, Hypnotic-, or Anxiolytic-Related Disorders in the DSM-5. Among the substances linked to SHAUDs are carbamates, barbiturates and barbiturate-like hypnotics, and benzodiazepines and benzodiazepine-like drugs. This class of substances includes practically all prescription antianxiety medications as well as all prescription sleeping pills. The substances can be obtained legally or illegally. Misuse may occur through overuse of the substance alone or in conjunction with other substances, e.g., methadone. As with other substances that might be available through prescription, it is necessary to determine whether they were appropriately prescribed and used. Tolerance to brain stem depressant effects will develop much more slowly. Sudden onset hypotension and respiratory depression that may lead to death can occur as the individual increases intake of the substance to achieve euphoria and/or other desired effects (American Psychiatric Association, 2013).

The 12-month prevalences tend to be slightly higher for males in adulthood but higher for females among the 12 to 17 year olds. Native Americans and Alaska Natives have the greatest 12-month prevalence (0.8 percent) as adults. Whites have the greatest rates (0.3 percent) for adolescents 12 to 17 years of age (American Psychiatric Association, 2013).

The typical course of SHAUD involves young people in their teens or early 20s who expand their occasional illegal use to the point at which they develop problems that meet criteria for diagnoses. Another less traveled clinical course involves a prescription from a physician, usually to treat insomnia, anxiety, or somatic complaints. As the need for higher doses develops, individuals begin to self-administer to the point that substance-seeking behavior becomes the norm (American Psychiatric Association, 2013).

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**The typical course of sedative, hypnotic, and anxiolytic use disorders involves young people in their teens or early 20s who expand their occasional illegal use to the point at which they develop problems that meet criteria for diagnoses (American Psychiatric Association, 2013).**

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It is important that SHAUD be differentiated from alcohol use disorder (AUD). It is also possible that some features of SHAUD may be the result of prior head trauma (e.g., subdural hematoma) or another medical condition (multiple sclerosis, e.g.). Finally, be clear that continued use of these drugs over four weeks is rarely indicated (American Psychiatric Association, 2013).

## Other/Unknown Substance Use Disorders.

Other (or Unknown) Substance-Related Disorders is the header for other (or unknown) substance use disorder (O/U SUD) in the DSM-5. Substances associated with these disorders do not readily fit into a class of drugs that are the focus of this section. In many cases, the substances are unrelated to the standard drug classes. For example, cortisol, antiparkinsonian medications, anabolic steroids, anti-inflammatory drugs, nitrous oxide, etc. are captured in this class. Also included are substances which cannot be identified either by the individual or because they are sold under fake names. O/U SUDs are mental disorders for which repetitive use of unknown and/or other substances continues, even when the person knows the substance(s) creates serious problems for him or her. The

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Support for an “other/unknown substance use disorder” diagnosis may be based on a person’s statement that the substance is not from one of the nine classes of drugs (American Psychiatric Association, 2013).

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problems must be reflected in the diagnostic criteria. Support for an O/U SUD diagnosis may be based on a person’s statement that the substance is not from one of the nine classes of drugs. Symptom characteristics can also suggest an unidentified substance. Moreover, suicide risks may be as prominent as with known substances. However, there is no evidence of unique risk

factors associated with the anonymity/uncertainty of the substance(s) linked to the disorder (American Psychiatric Association, 2013).

Prevalence data are limited but estimations suggest rates are lower than for any of the known substance classes. Course of development is not singly focused either. More often than not, O/U SUD gets re-classified once the other or unknown substance has been identified (American Psychiatric Association, 2013).

O/U SUD as a diagnosis in adolescence may be more difficult to assign because much of the use does not meet the standard of two or more criteria in the past year. Consistent with use of other substances, use of other/unknown substances typically does not occur in a vacuum. Most often these substances are taken concurrently with other substances. Thus, it becomes very important to inquire regarding symptoms that persist when some of the other substances are not being used. O/U SUD should be distinguished from sleep disorder, major/mild neurocognitive disorder, psychotic disorder, delirium, anxiety disorder, depressive disorder, or sexual dysfunction. Medical disorders may also be present with O/U SUD (American Psychiatric Association, 2013).

## Substance Use Disorders (SUDs) in Treatment Episode Data Set (TEDS)

The Treatment Episode Data Set (TEDS) yields information on the demographic and substance abuse characteristics of admissions to treatment of persons ages 12 and older for abuse of alcohol and/or drugs in facilities that report to individual State administrative data systems. Our state’s alcohol and drug information system, Tennessee Web-based Information Technology System, is

affectionately known as TN WITS (Personal communication, July 7, 2014). TEDS is not a measure of the number of individuals that have been admitted to treatment. Instead TEDS is an admission-based system. This means that persons who have been admitted three times within a calendar year would be counted as three admissions (SAMHSA/CBHSQ, 2013).

Demographic information is comprised of variables such as transaction type (i.e., whether admission; transfer, or discharge); type of service; whether the substance is a primary, secondary or tertiary problem; previous treatment history as well as the frequency of use, route of administration, and age of first use; and typical demographics such as age, ethnicity, race, employment, gender, and education. Substance problems can be reported for any of the following drugs at the primary, secondary, and/or tertiary level (SAMHSA/CBHSQ, 2013):

### 1. Alcohol (SAMHSA/CBHSQ, 2013)

Alcohol consumption is a leading culprit in mortality and morbidity related to both unintentional and intentional (i.e., violence-related) injuries (Cherpitel, 2013).

Tennessee's drunk driving statistics provide data on persons in an alcohol-related crash but not driving a motor vehicle at the time. In 2012, slightly better than one third of fatalities involved alcohol-related crashes and nearly 85 percent of the crashes involved blood alcohol concentration levels at or greater than the legal limit (i.e., 0.08) (alcoholalert.com, n.d.).

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Alcohol consumption is a leading culprit in mortality and morbidity related to both unintentional and intentional injuries (Cherpitel, 2013).

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It has only been since the second half of the 20<sup>th</sup> century that the negative consequences of alcohol use during pregnancy have been known (Kvigne, Leonardson, Borzelleca, & Welty, 2008; Warren, Hewitt, & Thomas, 2011). In the late 19<sup>th</sup> century, physicians prescribed alcohol to reduce morning sickness and the difficulties of childbirth for pregnant women. By the 1940s, it was believed that alcohol use during pregnancy was not harmful to the fetus. Alcohol has also been used by physicians to delay the onset of labor (Kvigne et al., 2008). However, the detrimental effects of alcohol use during pregnancy are now known and all advisories warn against its use by pregnant women in any amount (CDC, 2005; Ismail, Buckley, Budacki, Jabbar, & Gallicano, 2010).

The cerebral cortex, hippocampus, and cerebellum are especially vulnerable to damage from alcohol abuse. This means possible damage to problem solving and decision-making, memory, and movement coordination (NIDA, 2010).

### 2. Barbituates such as phenobarbital, pentobarbital, secobarbital, amobarbital, etc. (SAMHSA/CBHSQ, 2013)

Barbituates are sedatives that can be helpful with sleep problems, anxiety, and some seizures. Not taking these medications as prescribed can lead to addiction. High doses can negatively impact your breathing, particularly if used when drinking alcohol (Smith, 2013).

3. **Benzodiazepines** include alprazolam, temazepam, triazolam, clonazepam, flunitrazepam, prazepam, oxazepam, diazepam, lorazepam, chlordiazepoxide, halazepam, flurazepam, clorazepate, and other unspecified benzodiazepines (SAMHSA/CBHSQ, 2013). Xanax (alprazolam) and valium (diazepam) are perhaps the two most well-

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**Increases in emergency department visits were associated with non-medical use of alprazolam (SAMHSA, 2014).**

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known examples (Smith, 2013).

Non-medical use of alprazolam (Xanax) was associated with increases in emergency department (ED) visits from 2005 to 2010. While visits in 2011 remained stable, alprazolam was the most commonly prescribed psychiatric medication that year and the 13<sup>th</sup> most commonly sold medication in 2012 (SAMHSA, 2014). A good proportion of the ED visits involved a combination of alprazolam with another drug, often a pain reliever like oxycodone (SAMHSA/CBHSQ, 2013).

Alprazolam slows down movement of chemicals in the brain that may become unbalanced to reduce nervous tension, i.e., anxiety. The medication may be habit-forming and should never be purchased from vendors outside of the United States or on the Internet. There is evidence that medications distributed from the Internet may not be distributed by a licensed pharmacy and/or may contain dangerous ingredients. Tested samples of Internet-purchased alprazolam have been found to contain haloperidol (Haldol). In particular, persons with a history of drug/alcohol addiction, depression, or suicidal thoughts/behaviors should avoid taking alprazolam (Drugs.com, 2012).

#### 4. Cocaine/crack (SAMHSA/CBHSQ, 2013)

Referred to as the “wonder drug” in its early years of appeal in the United States, cocaine was originally freely available in saloons, from mail-order vendors, and even in grocery stores. It was often included in soda pop and some wines before its ill effects were known. President William Taft identified cocaine as “Public Enemy No. 1” and Congress, in 1914, passed the Harrison Act, tightly regulating the distribution and sale of the drug. Its appeal declined dramatically by the late 1950’s, but soon reappeared in the 1960’s (Das, 1993).

Because it is short-acting, cocaine can lead abusers to “binge”, i.e., to ingest the drug numerous times in a single session. Abuse can result in severe medical consequences related to the digestive system, respiratory system, nervous system, and the heart (NIDA, 2010).

## 5. Heroin (SAMHSA/CBHSQ, 2013)

A powerful opiate that produces feelings of relaxation and euphoria, it slows respiration. Its use has also been associated with increased risk of serious infectious diseases such as human immunodeficiency virus infection and acquired immune deficiency syndrome (HIV/AIDS) and hepatitis C, especially when taken intravenously (NIDA, 2010). U. S. physicians used opium as a therapeutic agent for multiple purposes, including to reduce spasms from tetanus. Heroin was synthesized from morphine in the late 1800's and produced commercially by a pharmaceutical company. The plan was for heroin to replace morphine use medicinally but it too was highly addictive and classified as an illegal drug (MethOIDE, n.d.)

Heroin use is on the increase, especially among prescription opioid users and young people. The drug is dangerously addictive, which increases overdose risk. Moreover, users have no control over the purity of the drug injected into their systems and/or its possible contamination with other drugs such as fentanyl. There are further reports that heroin laced with the elephant-tranquilizer carfentanil is being sold on the streets. Carfentanil is 10,000 times more potent than morphine and an analogue of fentanyl (Kounang & Marco, 2016). Thus, the heroin user can never be sure of the amount of active drug(s) being taken. Nationally heroin use has spread into the small towns and suburbs (Volkow, 2014). In Tennessee, heroin use is largely an urban problem.

## 6. Inhalants such as paint thinner, chloroform, ether, nitrous oxide, glue, gasoline, etc. (SAMHSA/CBHSQ, 2013).

These are volatile substances often found in a number of household products. They induce mind-altering effects and are extremely toxic. Inhalants can damage the brain, heart, lungs, and kidneys. Healthy persons can succumb to heart failure and death within minutes of even a single session of prolonged sniffing of an inhalant (NIDA, 2010).

## 7. Marijuana/hashish including THC as well as any other *cannabis sativa* preparations (SAMHSA/CBHSQ, 2013).

One of the most frequently abused illegal substances, marijuana impairs learning and short-term memory, coordination, and the ability to focus attention. It can also increase heart rate, harm the lungs, and exacerbate the risk of psychosis in persons with an underlying vulnerability (NIDA, 2010).

Both marijuana and hashish come from the Cannabis plant. Marijuana, often referred to as “weed”, looks like a greenish herbal mixture. Hashish is typically smoked and has a very pungent, recognizable odor. The drug (hashish) is made from the resin of the plant, which is dried into blocks. The texture of hashish can range from dry and hard like a piece of fudge to moist and pliable like plasticine. Its appearance is so varied that novice users are commonly duped into purchasing licorice or other inexpensive, benign substances that look similar (Hartney, n.d.).

## 8. Methamphetamine (SAMHSA/CBHSQ, 2013)

Methamphetamine is the only illegal substance that can easily be concocted from ingredients that were legally obtained. On the street, it may be referenced as crank, black beauties, bikers' coffee, ice, or meth, among other names (ACOG, 2011; NIDA, 2013). Discovered in Japan in 1919, it could be injected but smoking methamphetamine created the same effects as injecting. In this country, it rose to popularity in California through motorcycle gangs. Today anyone who can read a recipe can manufacture it (Methamphetamines.com, 2013).

Methamphetamine is more potent than amphetamine, its parent compound, with a half-life around 12 hours compared to 60 minutes for cocaine, for instance. It can be ingested orally or anally, injected, smoked, or snorted, but the injected or smoked high is more intense. Short-term, it is associated with increased energy and wakefulness as well as decreased appetite. Meth used can result in hypertension, seizures, even risk of the human immunodeficiency virus (HIV) due to increased sexual activity. Addiction, confusion, memory loss, weight loss, "meth mouth" (severe dental problems), depression, and violent behavior have been linked to long-term use of methamphetamine (ACOG, 2011; NIDA, 2013).

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Users of methamphetamine have elevated levels of psychiatric symptoms and psychological problems (Wright, Schuetter, Fombonne, Stephenson, & Haning III, 2012).

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The age of new methamphetamine users, on average, in 2012 was 20 years (NIDA, 2013). In general, users of methamphetamine have elevated levels of psychiatric symptoms and psychological problems (Wright, Schuetter, Fombonne, Stephenson, & Haning III, 2012).

## 9. Non-prescription methadone (SAMHSA/CBHSQ, 2013)

Non-prescription methadone involves using methadone inappropriately, a reality linked to one in three overdose deaths from prescription painkillers. Methadone is long-acting and can continue to circulate through a person's system after the pain-relieving effects have worn off. Methadone diversion might occur through individuals who have received take-home doses. The drug could end up in the hands of a current methadone client, thereby making his or her daily dosage higher than prescribed, or someone else looking for a "high" (CNN, 2012).

## 10. Other amphetamines such as MDMA, phenmetrazine, amphetamines, and other unspecified amines and related drugs (SAMHSA/CBHSQ, 2013)

Amphetamines are powerful stimulants that can produce alertness and feelings of euphoria. MDMA, also known as ecstasy, produces mind-altering and stimulant effects. It can elevate body temperature, heart rate, blood pressure, and heart wall stress. Ecstasy may additionally be toxic to nerve cells (NIDA, 2010).



First synthesized in 1887 by Edeleanu, a Romanian chemist, amphetamines increase attention and wakefulness and decrease fatigue and appetite. Use may lead to aggressiveness, irritability, delusions of grandeur, superiority, paranoia, power, and psychosis with delusions and hallucinations. Withdrawal symptoms may include somnolence and profound fatigue, which can last for months in heavy and/or chronic users. Abstinence may be associated with suicidal ideation, agitation, and severe anxiety. Users of amphetamines rapidly develop dependence and tolerance. Chronic users may require 10 to 25 tablets in order to achieve effects similar to 2 to 3 tablets for novice users. Polydrug use is also a problem common among amphetamine-users. Reports from the United Nations show amphetamines as the second most commonly abused illegal drug in the world after cannabis, particularly in developing regions of the world (Oei et al., 2012).

Prognosis is bleak for users of amphetamines because many of them fail to perceive their drug of choice as a problem. Thus people who use amphetamines are not likely to engage or stay in treatment. They tend to self-detoxify with legal and illegal substances (Oei et al., 2012).

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Prognosis is bleak for users of amphetamines because many fail to perceive their drug of choice as a problem (Oei et al., 2012).

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Promising research using other stimulants as substitutes to reduce cravings and withdrawal symptoms, akin to the concept of methadone use for opioid dependence is on

the horizon. Users of amphetamines who were treated with modafinil, sought counseling, and did not use other agents demonstrated significant reductions in systolic blood pressure and weight gain. Some antidepressants (e.g., fluoxetine) are showing promise as well but tend to be effective when the user is a male who actively seeks intensive counseling (Oei et al., 2012).

11. **Other hallucinogens** including DMT, STP, LSD, mescaline, peyote, hallucinogens, psilocybin, etc. (SAMHSA/CBHSQ, 2013)

LSD is one of the most potent of the perception-altering drugs of abuse in the United States. Its effects are unpredictable and abusers may “see” vivid images and colors, feel sensations, and hear sounds that seem real but are really nonexistent. Sometimes abusers have traumatic experiences and emotions that last for several hours. Short-term effects might include loss of appetite; sleeplessness; dry mouth; tremors; and increased body temperature, blood pressure, and heart rate (NIDA, 2010).

12. **Other non-barbiturate sedatives or hypnotics** such as ethchlorvynol, methaqualone, chloral hydrate, glutethimide, etc. (SAMHSA/CBHSQ, 2013)

These drugs were developed in the 1950s and later, designed to replace barbiturates in many areas of non-medical and medical use. Most of these sedatives were introduced as “non-barbiturates” to indicate their distinction with barbiturates. However, these “newer” sedatives showed to be much more like barbiturates than was originally realized (Drugtext.org, 2011).

13. **Other non-benzodiazepine tranquilizers**, for example, ambien, lunesta, etc. (SAMHSA/CBHSQ, 2013)

Non-benzodiazepines are sleep medications that are also known as “Z-drugs”. First produced in the late 1980s, they tended to have fewer side effects than benzodiazepines. These medications are potentially addictive and usually prescribed for only a short term, one week to 10 days, but definitely not longer than four weeks (Harding, 2014).

14. **Other opiates and synthetics** including codeine tramadol, meperidine, oxycodone, buprenorphine, hydrocodone, hydromorphone, pentazocine, opium, propoxyphene, morphine, and any other drugs with morphine-like effects (SAMHSA/CBHSQ, 2013)

Opioid drugs such as OxyContin, morphine, and Vicodin, have legitimate medical uses. However their nonmedical use and/or abuse can result in the same harmful consequences as abusing heroin (NIDA, 2010).

In the nineteenth century, pain relievers such as morphine and heroin were deemed as helpful in everyday life. However, people were not initially aware of the adverse effects associated with these and similar substances, especially the abuse potential (Musto, 1991). Over the past several decades, however, flexibility in laws governing the prescribing of opioids for the treatment of chronic non-cancer pain is said to have caused the dramatic increases in opioid use. Moreover, opioid analgesics are now responsible for more deaths than the number of deaths from heroin and cocaine combined or from both motor vehicle crashes and suicide (Manchikanti et al., 2012).

In May 2015, the Tennessee Bureau of Investigation (TBI) issued a warning about the opiate fentanyl being sold online as oxycodone. The pills looked like 33 mg Oxycodone, were the same size, and also featured with the signature A/215 stamp characteristic of oxycodone. However, these pills contained fentanyl, a pain killer that is 50 times more potent than heroin which can be deadly in high doses. The pills had been purchased from an online pharmacy and sold as oxycodone. TBI advised individuals with legitimate need for prescription pain relievers to obtain their medications through a licensed pharmacy and to avoid online purchase of prescription medicines. The TBI indicated that online purchases, while convenient, are not a safe alternative because there is no assurance regarding the quality or the actual ingredients (WRCB Staff, 2015).

15. **Other stimulants**, for example, methylphenidate (SAMHSA/CBHSQ, 2013).

Methylphenidate continues to be the most commonly prescribed medication for ADHD in young people around the world (Karla, et al., 2010).

16. **Over-the-counter medications** such as cough syrup, aspirin, sleep aids, diphenhydramine and other antihistamines, and any other legally obtained nonprescription medication (SAMHSA/CBHSQ, 2013)



17. **Phencyclidine (PCP)** (SAMHSA/CBHSQ, 2013)

Originally developed as an intravenous anesthetic, its medical use was discontinued due to the side effects of delirium and confusion. On the “black” market, the drug contains a number of contaminants that change its pure form in color and consistency. The liquid form is most frequently dissolved in ether. Phencyclidine is generally sprayed onto leafy material such as parsley, oregano, mint, or marijuana for smoking. Among its street names on the black market include Hog, Wick, Rocket Fuel, Embalming Fluid, Lovely, and Angel Dust (Drugs.com, 2014a).

18. **Other** includes substances such as GHB/GBL, diphenylhydantoin/phenytoin, ketamine, etc. (SAMHSA/CBHSQ, 2013).

Medications in this category might be used for a variety of purposes, many legitimate. For example, GHB or gamma Hydroxybutric acid was approved for medical use in the treatment of particular sleep disorders. The “street” version, however, is used for its euphoria and relaxation properties. In its typical liquid form, the drug is mixed with alcohol (NIDA InfoFacts, n.d.). Like ecstasy, GHB is very popular with club-goers and individuals that frequent “rave parties” (Gavin, 2014).

Diphenylhydantoin/phenytoin is used to prevent and control seizures. These medications reduce the spread of seizure activity in the brain. Sometimes they may be referred to as antiepileptic or anticonvulsant drugs (Web MD, n.d.). Ketamine, on the other hand, is an anesthetic that works to inhibit painful sensations in the brain. It is recommended that a responsible adult monitor and assist individuals receiving ketamine for up to 24 hours (Drugs.com, 2014b).

Many prescription medications that are increasingly being abused and/or used for nonmedical purposes are covered across various drug categories in TEDS. Among the most commonly abused classes include painkillers, sedatives, and stimulants. Disturbing aspects include the increased prevalence of teenagers and young adults in abuse of these medications, as well as the misperception that they are safe to take because they were prescribed by physicians. This misconception holds even when prescription medications are used illegally (NIDA, 2010).

## WHO MAY HAVE A Substance Use Disorder (SUD)?

Substance use constitutes one of this country’s most challenging problems. It is an equal opportunity destroyer, affecting individuals from all income levels, geographic areas, racial groups and ethnicities, ages, and genders (NIDA, n.d.). Males and females can have substance use disorders. Substance use disorders can affect persons with mental health disorders as well as individuals without such disorders. People living in the South, North, East, or West can have a SUD. Individuals below the age of 18 years, between 18 and 64 years of age, or 65 years of age and over can have a substance use disorder (SUD). Substance use disorders (SUDs) can affect anyone of any racial or ethnic group. Individuals from low-, middle-, and high-income families can have a SUD. Professional and nonprofessional people can have a SUD. Substance use disorders (SUDs) can affect individuals from all walks of life. Substance use does not discriminate. It intersects with,

and contributes to, many of the challenges that we face as a state and a nation, including poverty, mental illness, school failure, criminal activity, and a number of health problems (Zobeck, 2014).

Besides people themselves having a SUD, many individuals have family and/or friends that have a substance use disorder (SUD). There are individuals who reside in communities where substance issues are very problematic. Substance use issues are more prevalent than many people think and not just a problem of the poor and marginalized. A host of other factors besides poverty play into substance use (National Poverty Center, 2004).

Combined 2008 to 2012 National Survey on Drug Use and Health (NSDUH) data showed that people with employment can have a substance use disorder (SUD). Per that data set, slightly more than half the adults (i.e., ages 18 to 64) with SUDs had full-time employment. However, substance use appeared to, in part, be a function of whether employers had written substance use policies. For example, full-time adult workers that used substances were more likely to work for an employer with no written policy about employee substance use. Female workers were more likely to report working for an employer that provided substance use policies and programs than males. However, male workers were more likely to indicate receiving educational information from their employer (SAMHSA/CBHSQ, 2014).

## **Does Substance Use Disorder involve Drugs or Narcotics?**

Drugs are substances intended for use in the diagnosis, mitigation, prevention or cure of disease in animals or humans, and any substances other than water, food, or oxygen that are intended to influence the body or mental function of animals or humans. Scientists define drugs as substances that influence neurological or biological states in humans or animals. Therefore, drugs can be synthetic, such as sedatives or amphetamines, or organic, such as tetrahydrocannabinol (THC) found naturally in marijuana. They can be swallowed, smoked, taken as a suppository, applied to the skin, inhaled through the nostrils, or injected with a needle. By statute, narcotics have been defined as drugs that dull the senses and frequently become addictive after prolonged use (TheFreeDictionary, n.d.).

Federal and state laws in this country commonly distinguish narcotics from drugs. Thus, they are regulated through the United States Food and Drug Administration (FDA). In the legal system, the term narcotics refers to illegal drugs that have a high potential for abuse (Knouff, n.d.). The Feds and most states use a classification system to control the use of dangerous drugs. This system consists of schedules which include both illicit and harmful legal drugs (TheFreeDictionary, n.d.).

Drugs considered controlled substances under the Controlled Substances Act (CSA) are divided into five schedules at the Federal level. Lower numbered schedules are considered the most dangerous drugs while schedules carrying higher numbers are considered to be the least dangerous (CriminalDefenseLawyer.com, n.d.; LawUpdater.com, 2016). Placement in a schedule is based on whether the drugs have currently accepted medical use in treatment in the United States, their relative abuse potential, and their likelihood of causing dependence when abused. Definitions of each schedule and example substances are listed below (DOJ/DEA/ODC, n.d.).

## **Controlled Substance Schedules – Federal.**

### **Schedule I**

- Substances have no accepted medical use in the United States currently, lack accepted safety for use under medical supervision, and have high potential for abuse.
- Examples of substances include, but are not limited to, heroin, lysergic acid diethylamide (LSD), 3,4-methylenedioxymethamphetamine ("Ecstasy"), and marijuana (cannabis) (DOJ/DEA/ODC, n.d.).

### **Schedule II/IIN (2/2N)**

- These substances have high potential for abuse that may lead to severe physical or psychological dependence.
- Substance examples include, but are not limited to, hydromorphone (Dilaudid®), oxycodone (OxyContin®, Percocet®), meperidine (Demerol®), methadone (Dolophine®), and fentanyl (Sublimaze®, Duragesic®). Hydrocodone, morphine, and codeine are examples of other Schedule 2 narcotics. Schedule 2N stimulants include, but are not limited to, methylphenidate (Ritalin®) and amphetamine (Dexedrine®, Adderall®). Pentobarbital is an example of other Schedule II substances (DOJ/DEA/ODC, n.d.).

### **Schedule III/IIIN (3/3N)**

- The potential for abuse for substances in this schedule are less than substances in Schedules I or II but abuse may lead to high psychological dependence or low to moderate physical dependence.
- Schedule III narcotics examples include, but are not limited to, buprenorphine (Suboxone®) and products containing not more than 90 milligrams of codeine per dosage unit (Tylenol with Codeine®). Schedule IIIN non-narcotics include, but are not limited to, anabolic steroids such as Depo®-Testosterone, e.g. (DOJ/DEA/ODC, n.d.).

### **Schedule IV**

- These substances have a lower potential for abuse relative to substances in Schedule III.
- Schedule IV substances include, but may not be limited to, alprazolam (Xanax®), diazepam (Valium®), lorazepam (Ativan®), carisoprodol (Soma®), tramadol (Ultram®) and triazolam (Halcion®) (DEA/OD/ODE, 2014; DOJ/DEA/ODC, n.d.).

### **Schedule V**

- Substances in this schedule consist primarily of preparations containing limited quantities of certain narcotics and have a low potential for abuse relative to substances listed in Schedule IV.
- Schedule V examples include, but may not be limited to, cough preparations that contain no more than 200 milligrams of codeine per 100 milliliters or per 100 grams (Robitussin AC®, Phenergan with Codeine®) (DOJ/DEA/ODC, n.d.).

## **Controlled Substance Schedules – Tennessee.**

### **Schedule I**

- Substances have no accepted medical use in treatment in the United States currently or lack accepted safety for use in treatment under medical supervision, and have high potential for abuse.
- Examples of substances include, but are not limited to, opiates and their isomers, esters, ethers, salts, etc., including acetylmethadol; opium derivatives like codeine methylbromide; hallucinogenic substances; depressants like methcathinone; and stimulants such as fenethyline (Tennessee Statutes, n.d.).

### **Schedule II**

- These substances have high potential for abuse that may lead to severe psychic or physical dependence or they have accepted medical use in treatment in the United States currently or accepted medical use with severe restrictions currently.
- Substance examples include, but are not limited to, those with chemical synthesis or vegetable origin such as oxymorphone and opium extracts; opiates such as carfentanil and remifentanil; stimulants like methylphenidate; depressants like secobarbital; and immediate precursors to phencyclidine (PCP), e.g. (Tennessee Statutes, n.d.).

### **Schedule III**

- These substances have accepted medical use in treatment in the United States currently and the potential for abuse for substances in this schedule are less than substances in Schedules I and II. Additionally, abuse of the substances may lead to high psychological dependence or low to moderate physical dependence.
- Examples of substances include, but are not limited to, stimulants such as phendimetrazine; depressants like amobarbital; nalorphine; narcotic drugs with material, compound, mixture, or preparation containing buprenorphine or its salts, e.g.; and anabolic steroids such as boldenone (Tennessee Statutes, n.d.).

### **Schedule IV**

- These substances have a low potential for abuse relative to substances in Schedule III, accepted medical use in treatment in the United States currently, and abuse may lead to limited psychological or physical dependence relative to substances in Schedule III.
- Schedule IV substances include, but may not be limited to, narcotic drugs consisting of not more than one milligram of difenoxin and not less than 25 micrograms of atropine sulfate per dosage unit; depressants such as diazepam; fenfluramine; stimulants like modafinil; and other substances such as pentazocine (Tennessee Statutes, n.d.).

### **Schedule V**

- These substances have a low potential for abuse relative to substances in Schedule IV, accepted medical use in treatment in the United States currently, and limited psychological or physical dependence liability relative to substances in Schedule IV.
- Schedule V examples include, but may not be limited to, narcotic drugs, including those containing nonnarcotic active medicinal ingredients and stimulants such as pyrovalerone along with its salts, isomers, and salts of the isomers, e.g. (Tennessee Statutes, n.d.).

### **Schedule VI**

- Substances in this schedule do not fit in Schedules I through V, in the opinion of the commissioner of mental health and substance abuse services in agreement with the commissioner of health.
- Substances included in this schedule consist of marijuana; tetrahydrocannabinol; and synthetic equivalents (Tennessee Statutes, n.d.).

### **Schedule VII**

- Substances in this schedule do not fit in Schedules I through VI.
- Schedule VII includes butyl nitrite and any of its isomers (Tennessee Statutes, n.d.).

## **Degrees of Substance Use/Helpful Tips**

There are people who drink alcohol every day and swear they can quit any time they want to. Is this a person who is still in control of his/her substance use or is it an excuse? What about people who use drugs other than or in addition to alcohol recreationally on a daily basis? Where do they fit? Do they have a problem? The four degrees of drug use indicated below may provide helpful common sense distinctions about whether help should be considered.

### **1. Experimentation All Alone**

This may be the first way that individuals enter into drug use. Sometimes the individual is curious about a particular drug's effects. Some persons succumb to the pressures of others. While seemingly a harmless entry into substance use, one use can result in harm, especially when the individual makes poor decisions under the influence such as drinking and driving, e.g. For an individual who is predisposed to addiction, one use can set into motion a pattern of substance abuse and dependency.

### **2. Social Use**

The social substance user consumes substances in social situations, generally to fit in, relax, or have fun. Again, though seemingly innocent compared to the solitary substance use, social use more often than not leads to greater degrees of substance use. It is very possible for the social user to cross the line into substance abuse if he or she continues to use even in the face of negative consequences.

### **3. Binge Use**

This use is often associated with drinking but can also apply to use of other substances. It involves periodic use that might be categorized as heavy use. Bingeing may encompass only one to two days of substance use per week but in excessive amounts. Such use establishes a problematic pattern. Lots of bad things happen when individuals choose to binge.

### **4. Substance Abuse and Addiction**

Whether the use is referenced as abuse, dependence or addiction, substance use that interferes with work, health, relationships, career, finances, or other areas of life, it poses a significant problem. Additional signs of addiction include:

- Trying to control the substance use unsuccessfully
- Using substances in dangerous situations (e.g., before driving)
- Spending a great deal of time finding, using and recovering from the effects of substances
- Withdrawing from family and friends or giving up other activities to use substances
- Needing more of a substance to get the same high (i.e., tolerance)
- Experiencing withdrawal symptoms when trying to quit (Sack, 2014)

Substance use can become all-consuming and difficult to overcome, even with help.

- ✓ Even with medication assistance, only 20 to 50 percent of people with SUDs remain abstinent during the first year of treatment (Khodabandeh, Kahani, Shadia, & Abdollahi, 2012).

- ✓ Between 2007 and 2010, slightly more than 12 percent of people seeking treatment for alcohol or illicit drug abuse were deterred because they were concerned that the community would view them in a negative light (Recovery Month, 2014).
- ✓ Relapse is an unavoidable phenomenon in the course of substance use treatment (Khodabandeh et al., 2012).

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Department of  
**Mental Health &  
Substance Abuse Services**



8/15/2016

**Substance Use Best Practice Tool  
Guide**

**ADDICTION**

Division of Clinical Leadership in Collaboration with the  
Division of Substance Abuse Services

# Addiction

## What Is Addiction?

Use of substances can lead to addiction. The word “addiction” comes from the Latin word “addicere”, which means enslaved by or bound to. As originally used, the word was not linked to substance use behaviors. Instead, it was first associated with excessive alcohol use. It was not until the 1980s that the word “addiction” became linked almost exclusively to excessive patterns of substance use (Ries, Fiellin, Miller, & Saitz, 2009).

Gregory Amer, a physician at the University of Minnesota Medical Center, Fairview, described addiction in the following way: ‘the disease of addiction is never cured, it never goes away – the “pilot light always stays on”’ (MDHS, 2013, p.14). The American Society of Addiction Medicine’s (ASAM’s) definition is more scientific but consistent with Amer’s description. ASAM defines addiction as “a primary, chronic disease of brain reward, motivation, memory, and related circuitry” (ASAM, 2013, p. 10). Any dysfunction in the circuitry will lead to social, biological, spiritual, and psychological manifestations that are reflected in a person’s pathologically pursuing relief and/or reward by substance use and other behaviors. The person will not be able to consistently abstain; demonstrate impairment in craving, diminished recognition of interpersonal relationships, and behavioral control; and exhibit dysfunctional emotional response (ASAM, 2013). In short, it is loss of control over substance use (Nestler, 2009). Thus, an individual with such characteristics is considered to be in active addiction (MDHS, 2013). Addiction usually occurs through misuse as opposed to proper use of medication (SAMHSA/CSAT, 2011). As true for other chronic diseases,

addiction will include cycles of relapse and remission. Failure to provide treatment and/or encourage engagement in recovery activities may result in disability or premature death (ASAM, 2013).

Addiction involves the compulsion to seek and use drugs, a loss of control over how the drugs are used, and the emergence of a negative emotional state (Koob, 2013;

Addiction usually occurs through misuse as opposed to proper use of medication (SAMHSA/CSAT, 2011).

NIDA, 2016). Per the ASAM definition, features include:

- An inability to consistently **A**bstain
- Any impairment in **B**ehavioral control
- **C**raving or more “hunger” for substances or rewarding experiences
- **D**iminished recognition of significant problems in the individual’s interpersonal relationships and behaviors
- A dysfunctional **E**motional response (ASAM, 2013).

## Addiction

**D**rug addiction is a complex disease (NIDA, 2012). It affects both the brain and behavior. Years of research has continued to demonstrate that the condition is treatable (NIDA, 2010). Substances including alcohol and nicotine tap into the brain's communication system and interfere with the way the nerve cells normally send, receive, and process information. Some drugs, such as heroin and marijuana, have a chemical structure that actually mimics the natural neurotransmitter. However, the messages being transmitted through the network are abnormal. Other drugs, such as cocaine and amphetamines, cause the release of an abnormal number of natural neurotransmitters or prevent the normal recycling of brain chemicals, ultimately disrupting the communication channels. Most drugs indirectly or directly work on the brain's reward system and flood the circuit with dopamine. (Dopamine is a neurotransmitter that regulates movement, cognition, motivation, emotion, and feelings of pleasure.) Drugs can release two to ten times the amount of dopamine that natural rewards do. Thus, it is the overstimulation of this system that produces the euphoric effects sought by individuals who abuse drugs and leads them to repeat the behavior (NIDA, 2010).

To adjust to the overwhelming surges of dopamine, the brain produces less dopamine or reduces the number of receptors that can receive signals.

This may leave the reward circuit of the substance abuser abnormally low and the ability to experience pleasure weakened. Hence, the development

of tolerance or the taking of larger and larger amounts of the drug by the substance abuser than at the first creation of the dopamine high, just to try to bring their dopamine function back up to normal levels. Of course, the development of tolerance can eventually lead to severe changes in neurons and brain circuits. Chronic exposure to drugs of abuse, as in addiction, erodes an individual's self-control and ability to make sound decisions while sending intense impulses to take drugs (NIDA, 2010).

Drugs can release two to ten times the amount of dopamine that natural rewards do (NIDA, 2010).

## Drug Combinations

Unfortunately many substances of abuse are used in combination, which is a particularly dangerous practice. It could involve the co-administration of two legal drugs, e.g., nicotine and alcohol; the random mixing of prescription drugs; and/or the deadly combination of cocaine or heroin with fentanyl. Regardless the context, such practices are extremely harmful and pose significantly higher risks than the already harmful consequences associated with use/dependence on a single drug (NIDA, 2010).

## Myths about Drug Abuse and Addiction

*Myth 1: Overcoming addiction is simply a matter of willpower. You can stop using drugs if you really want to.* Prolonged exposure to drugs alters the brain in ways that result in powerful cravings and a compulsion to use. These brain changes make it extremely difficult to quit by sheer force of will.



## Addiction

***Myth 2: Addiction is a disease; there's nothing you can do about it.*** Most experts agree that addiction is a brain disease, but that doesn't mean you're a helpless victim. The brain changes associated with addiction can be treated and reversed through therapy, medication, exercise, and other treatments.

***Myth 3: Addicts have to hit rock bottom before they can get better.*** Recovery can begin at any point in the addiction process—and the earlier, the better. The longer drug abuse continues, the stronger the addiction becomes and the harder it is to treat. Don't wait to intervene until the addict has lost it all.

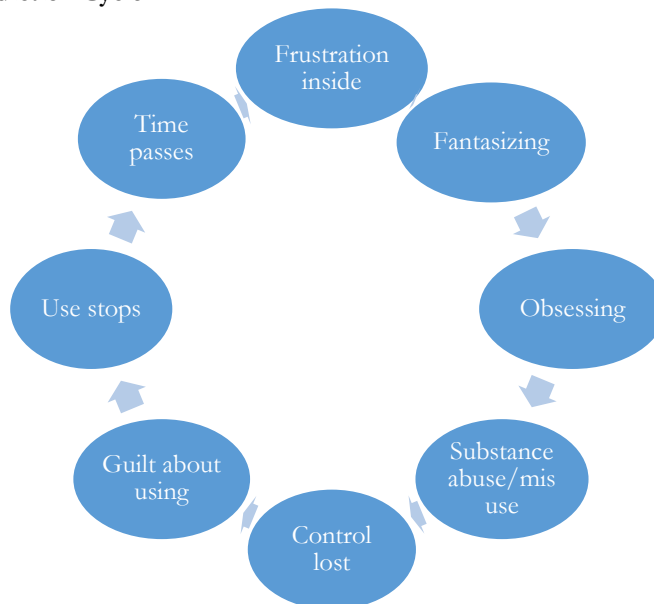
***Myth 4: You can't force someone into treatment; they have to want help.*** Treatment doesn't have to be voluntary to be successful. People who are pressured into treatment by their family, employer, or the legal system are just as likely to benefit as those who choose to enter treatment on their own. As they sober up and their thinking clears, many formerly resistant addicts decide they want to change.

***Myth 5: Treatment didn't work before, so there's no point trying again.*** Recovery from drug addiction is a long process that often involves setbacks. Relapse doesn't mean that treatment has failed or that you're a lost cause. Rather, it's a signal to get back on track, either by going back to treatment or adjusting the treatment approach. (Robinson, Smith, & Saison, 2014)

## The Addiction Cycle

A number of sources identify an eight-step cycle of addiction. Persons who are addicted to substances may go through the phases repeatedly before eventually taking a step toward recovery (Treatment4Addiction.com, 2011).

Figure 1. Addiction Cycle



Source: Adapted from Treatment4Addiction.com, 2011.

## Addiction

Phase 1 involves feelings of frustration or some kind of mental anguish that leads to depression or anxiety and triggers craving for drug use. Entering this phase may be the result of a mental disorder or the occurrence of some stressful event such as a relationship that grows apart or the death of a loved one. The second phase involves fantasizing about substance use. The person who is addicted will consider using drugs and fantasize about the use. Most often, the individual does not speak openly about these thoughts (Treatment4Addiction.com, 2011).

The fantasizing typically evokes obsessions, the third phase of addiction. The fantasies grow, thus making the thought of use nearly constant. Sometimes the obsessions are accompanied by a sense of impending doom and the person now comes to terms with the idea of using again. Phase 4 involves actual addictive activity, i.e., actual drug use (Treatment4Addiction.com, 2011).

Once the drug use starts to spiral out of control for the individual such that the addictive activity has control of his/her life, the fifth phase of powerlessness commences. The person uses drugs at inappropriate times, whether or not he or she does not really want to. In this phase, the individual may feel completely incapable of abstinence for even a relatively short period of time (Treatment4Addiction.com, 2011).

The chaos that has resulted from the loss of control leads to feelings of guilt, shame, or remorse, the sixth phase. The person may feel very regretful about the decision to use substances again and may be too embarrassed to let anyone know about these insecurities. The self-image has been negatively affected and a sense of dissatisfaction for life is also noted for most people in this phase (Treatment4Addiction.com, 2011).

In Phase 7, the individual begins to make resolutions to end the behavior. This phase may involve promises to self or others that will soon end. It may further incorporate a vow to end substance use forever. Drug paraphernalia may even be disposed of. Substance use may abruptly end for a period of time, but without a proper recovery plan that is put into action, the individual will move into the eighth phase, which starts the cycle all over again. Phase 8 often results in the person forgetting the chain of events that occurred during the last relapse. Thus, there is significant mental pain associated with this phase (Treatment4Addiction.com, 2011).

## Cost of Addiction

Figure 2. Percent of Budgets Spent on Addiction/Substance Use



Source: NCAS, 2015.

## Addiction

According to the National Center on Addiction and Substance Abuse (NCAS) (2015), addiction and substance use spending consumes 10 percent of the federal budget and 16 percent of state budgets. The **health care system** receives the largest share of spending from consequences of addiction and substance use. Substances, including alcohol and tobacco, cause or contribute to more than 70 other conditions requiring medical care such as heart disease, lung disease, cancer, HIV/AIDS, cirrhosis, pregnancy complications, ulcers, and trauma.

**Adult/juvenile corrections and the courts** get the second largest share of federal and state spending related to addiction/substance use. Data indicate that 85 percent of inmates in the adult corrections system are substance involved and almost two thirds have a history of substance use problems. Of the young people that enter the juvenile justice system, 78 percent are substance involved and 44 percent meet clinical diagnosis for substance use problems (NCAS, 2015).

The third largest recipient of government spending from consequences of addiction/substance use is the **educational system**. Substance use negatively affects the learning environment and academic performance. It increases the chances that the young person will drop out of school or fail to attend college and or not obtain a college degree (NCAS, 2015).

Consequences of addiction/substance use also mean spending on **public safety** and **workforces**. States have to invest in highway patrol, local law-enforcement programs and highway-safety, special drug enforcement programs, as well as accident-prevention programs to keep the public safe. Moreover, addiction/substance use compromises workforce productivity and increases the cost of doing business. Besides affecting personal job performance, substance use impacts co-workers/the success of the company. Co-workers, for example, report having been injured or almost injured or covering for another employee's substance use. Addiction/substance use places a burden on **many other governmental services**, including mental health, child welfare, developmental disabilities, food and nutrition assistance, and housing and employment assistance (NCAS, 2015).

## Model of Care – Traditional versus Chronic Disease Model

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Addiction cannot be cured  
(SAMHSA/CSAT, 2011).

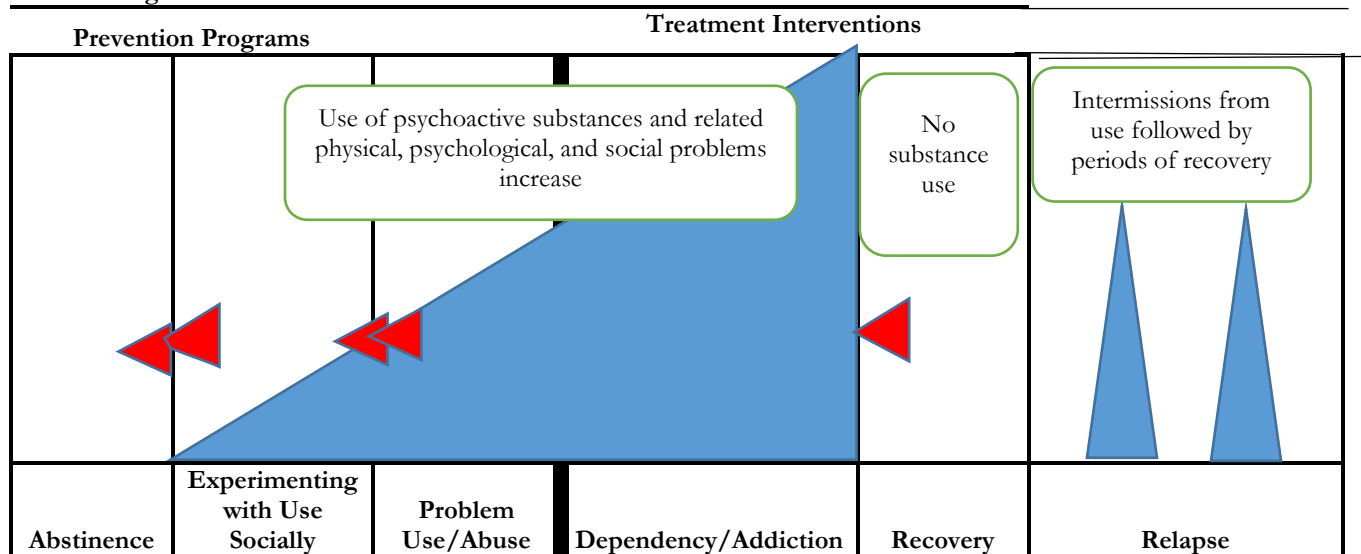
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The traditional acute care model of substance use treatment has encouraged the public to expect that persons entering addiction treatment will be cured and able to maintain lifelong abstinence following a single episode of specialized treatment (MDHS, 2013; White, Boyle, & Loveland, 2003). **However, addiction cannot**

**be cured.** It can be treated with medication, counseling, and/or support from family and friends (SAMHSA/CSAT, 2011).

## Addiction

Figure 3. Process of Addiction



Source: Adapted from Crowe & Reeves, 1994.

The figure above provides a graphic representation of the progression of substance use through three states of experimental/social use, problem use/abuse, and dependency/addiction. Related physical, psychological, and social problems increase as use progresses through the stages. Many individuals are able to manage their substance use during earlier stages and may move back and forth from abstinence to problem use. Many professionals contend that individuals who reach the stage of dependency/addiction have acquired a chronic, relapsing disorder for which there is no cure. It is hypothesized that, at this point, the individual cannot return to earlier stages of controlled use without help (Crowe & Reeves, 1994).

Treatment becomes necessary to help individuals addicted to substances enter a stage of recovery during which they can abstain from substance use and engage in improved physical, psychological, and social functioning (Crowe & Reeves, 1994).

## Determining If You May Be Addicted to Substances

There are confidential screening tools online, as well as in this document, to help you determine if you may need to seek help for a substance use problem. You might also read and honestly respond to the questions below. Written by persons addicted to substances that were participants in Narcotics Anonymous (NA), the results may help you remove doubts about whether your substance-using behaviors signal addiction. Consider further evaluation and/or seeking help from a professional knowledgeable in the area of substance use if you respond “Yes” to some of the questions (about.com, 2014).

- Do you avoid people or places that do not approve of you using drugs?
- Do you continue to use despite negative consequences?
- Do you ever question your own sanity?

### *Addiction*

- Do you ever use alone?
- Do you feel it is impossible for you to live without drugs?
- Do you put the purchase of drugs ahead of your financial responsibilities?
- Do you regularly use a drug when you wake up or when you go to bed?
- Do you think a lot about drugs?
- Do you think you might have a drug problem?
- Does the thought of running out of drugs terrify you?
- Does using interfere with your sleeping or eating?
- Has using affected your sexual relationships?
- Has your job or school performance ever suffered from the effects of your drug use?
- Have you ever been arrested as a result of using drugs?
- Have you ever been in a jail, hospital, or drug rehabilitation center because of your using?
- Have you ever felt defensive, guilty, or ashamed about your using?
- Have you ever lied about what or how much you use?
- Have you ever manipulated or lied to a doctor to obtain prescription drugs?
- Have you ever overdosed on any drugs?
- Have you ever stolen drugs or stolen to obtain drugs?
- Have you ever substituted one drug for another, thinking that one particular drug was the problem?
- Have you ever taken drugs you didn't prefer?
- Have you ever taken one drug to overcome the effects of another?
- Have you ever thought you couldn't fit in or have a good time without drugs?
- Have you ever tried to stop or control your using?

## Addiction

- Have you ever used a drug without knowing what it was or what it would do to you?
- Have you ever used drugs because of emotional pain or stress?
- Have you had irrational or indefinable fears?
- Is your drug use making life at home unhappy? (about.com, 2014)

## Treatment

There are a number of treatments available to help individuals counter the power of addiction's disruptive effects. Research has shown that the combination of addiction treatment medications with behavioral therapy is the best way to ensure success for most individuals addicted to substances. This document provides detailed information on evidence-based (EB) medication-assisted treatments and psychosocial therapies such as behavior therapy as aids to clinicians and others that may be interested in education and information on the topic. It is recommended that treatment approaches be tailored to each individual's drug use patterns and co-occurring psychiatric, medical, and social problems, if evident, to effect sustained recovery and a life with substance abuse (NIDA, 2012).

Treatment for addiction must help a person stop using drugs, stay drug-free, and be productive in his or her family, work, and society. Therefore, effective treatment programs must be based on the following key principles:

- Addiction is a treatable disease that affects brain function and behavior, despite being complex.
- There is no single treatment that is right for everyone.
- People need to have quick access to treatment.
- All of a patient's needs, not just his or her drug use, must be addressed for treatment to be effective.
- Medications are an important part of treatment, especially when used in combination with behavioral therapies.
- Treatment plans must be reviewed often and adapted to align with the patient's changing needs.
- Treatment should address other possible mental disorders.
- Medically assisted withdrawal management is only the first stage of treatment.
- Treatment does not need to be voluntary for it to be effective.

## Addiction

- Drug use during treatment must be monitored on a continual basis.
- Treatment programs should test patients for tuberculosis, hepatitis B and C, HIV/AIDS, and other infectious diseases and teach them steps they can take to reduce their risk of such illnesses (NIDA, 2016).

Unfortunately, many individuals with substance use disorders (SUDs) may not seek treatment. Data from the 2012 National Survey on Drug Use and Health indicate that only about 11 percent of persons who need substance abuse treatment actually receive it (SAMHSA, 2014). Some persons are in denial about their substance use problem. Others believe that they should be able to work through their substance use problem without help. Then there are individuals who carry shame or fear about accessing treatment, potential physical withdrawal from substance use, and/or failure to recover. Additionally there is the fear of what family, friends, and/or employers might think if they seek treatment (MDHS, 2013).

## Final Comments

Not all individuals that use substances, whether alcohol or other drugs, become addicted. In fact, researchers say that risk of addiction is influenced by a myriad of factors, including biology, age, stage of development, and social environment. Individuals who have more risk factors have the greatest chance of moving into addiction with their substance use (NIDA, 2012). Persons addicted to specific substances also need to be careful about developing tolerance for substances of the same class, even those to which the body has not yet been exposed (TheFreeDictionary, n.d.). Such cross-tolerance can be exhibited by cigarette smokers to caffeine, e.g., where they experience a lower sensitivity to caffeine's stimulant effects than nonsmokers (SoberPlace, 2009).

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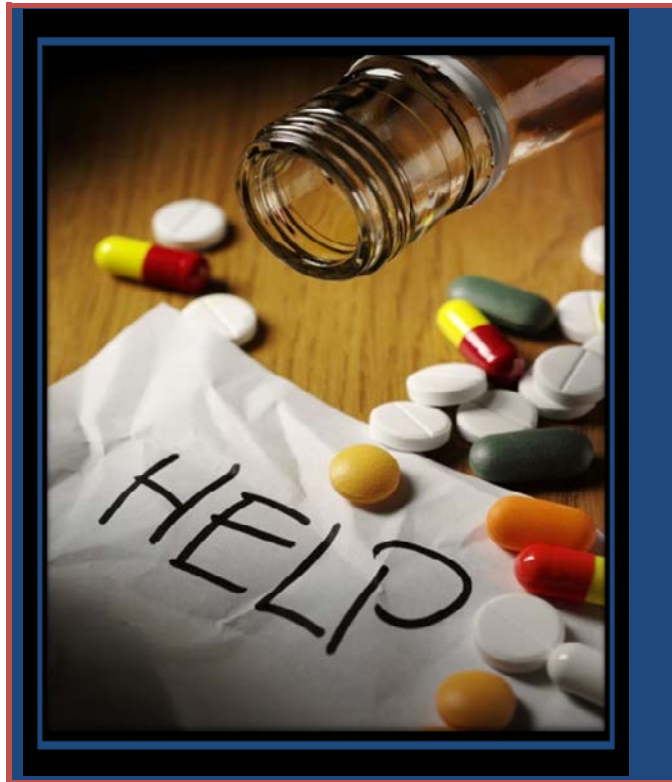
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Department of  
**Mental Health &  
Substance Abuse Services**



8/15/2016

**Substance Use Best Practice Tool  
Guide**

**PREVENTION/EARLY  
INTERVENTION**

Division of Clinical Leadership in Collaboration with the  
Division of Substance Abuse Services

# Prevention

Prevention can be defined as any activity designed to avoid substance use and/or abuse and reduce its social and health consequences. Actions may be aimed at reducing demand as shown in health promotions, e.g., and/or reducing supply, for instance, making substances less available (Medina-Mora, 2005).

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**Preventive factors seek to enhance protective factors and/or reduce risk factors (Kane & Ballue, 2013).**

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Preventive factors seek to enhance protective factors and/or reduce risk factors (Kane & Ballue, 2013).

Risk factors increase the likelihood of high-risk

behaviors, which often result in negative outcomes. Protective factors, on the other hand, lower the probability of high-risk behaviors and promote positive outcomes (Butler Center for Research, 2010).

Prevention is critical in the reduction of negative impact and outcomes associated with substance use and abuse and messages have become one of the most effective prevention interventions. It has been shown that consistent, pervasive messages to young people about substances can prevent substance use and/or abuse. In fact, effective prevention not only routinely repeats the same messages, but it is further delivered by multiple messengers—peers, parents, schools, and the community (Butler Center for Research, 2010).

The primary goal of prevention is to delay or prevent the onset of substance use and/or abuse. Delay alone is important. Research indicates youth that begin using substances prior to age 14 are significantly more likely to become substance dependent at some point in their lives (Butler Center for Research, 2010; CAPT, 2012). Thus, the prevention messages are paramount. Protective factors such as strong family bonds and proactive parenting additionally increase the probability that substance use/abuse will be delayed (Butler Center for Research, 2010).

In practice, there are essentially five models of substance abuse prevention, each based on a different set of underlying assumptions about behaviors of substance abuse and their motivations (Duncan & Gold, 1982).

First, there is the law enforcement model. Prohibition laws played a substantial role along with the threat or infliction of punishment to prevent substance abuse. This model was based on the assumption that substance abuse was moral issue and that people who abused substances must be punished for their own good, not to mention the good of society. Also inherent in this model is the fact that certain substances are inherently evil or at least too potent for people to be allowed to use. Hence, only the threat of punishment could keep people from being tempted to experiment with substances and become hopelessly addicted. This model has not been successful. Actually prohibition of substances resulted in more substance abuse and more crime, along with a growth in a substance-rich black market (Duncan & Gold, 1982).

The medical model is the second model. This model treats substance abuse as if it were an infectious epidemic. It relies on early identification and isolation of people who abuse substances before they can infect others. The model incorporates charts and pamphlets that tell parents and teachers how to identify substance-using/abusing teens. Strategies might consist of having parents search their teen's rooms for substances or to allow strip search of school lockers when there is

adequate suspicion. Jails are replaced by involuntary treatment. Like the law enforcement model, neither has the medical model been successful. It has also been mentioned that users of substances labeled as such through this model might become a self-fulfilling prophecy and live up to the expectations engendered by the label (Duncan & Gold, 1982).

The third model is the educational model. This model assumes that substance abuse results from poor choices made in ignorance of the hazards and effects of substances. Thus, it is anticipated that educating people about the dangers of substance abuse will assist them in making the right decisions and avoid substance abuse. Scare tactics as well as skill-building are applications of this model. Unfortunately substance education has not been the great success story either, especially not for young people (Duncan & Gold, 1982).

Fourth is the psychosocial model. Substances are used as a means of coping with day-to-day frustrations and problems. Prevention then needs to provide opportunities to deal with those issues. Strategies for preventing substance use might include peer counseling, crisis hotlines, transcendental meditation™, and the like. Activities such as adventure and self-expression are also great alternatives to using substances based on this model (Duncan & Gold, 1982).

The fifth and final model is the sociocultural model. Here the focus is the root of substance abuse in the country, not in the individual person. The solution then is in changing communities, society, not in changing the individual. Societies that discriminate against the marginalized (e.g., ethnic minorities) should not expect to escape substance abuse. Societies that look the other way given gender discrimination, e.g., will not be able to prevent substance use/misuse. Societies that advertise pills as solutions to problems will find its youth turning to illicit substances for solutions (Duncan & Gold, 1982).

The Office of National Drug Control Policy [ONDCP] Web site (n.d.) recognizes the value of prevention efforts and promotes such approaches as the most cost-effective, common-sense ways to encourage healthy and safe communities. Research continues to show the relationship between substance use and poorer academic performance, lost productivity, traffic-crash deaths, sexually transmitted infections (STI), hepatitis C, human papillomavirus (HPV), etc. Substance use further contributes to rates of human immunodeficiency virus (HIV) transmission and puts children at risk for abuse and neglect. Preventing substance use and dependence before it ever begins can help save lives and reduce costs related to health care and criminal justice.

## Prevention Principles

There are 16 principles of prevention. They have been revised based on research funded by the National Institute on Drug Abuse (NIDA) as well as the core elements observed in research on effective prevention programs (NIDA, 2003). The principles dictate that prevention programs:

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There are 16 prevention principles (NIDA, 2003).

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1. Should reverse or reduce risk factors while enhancing protective factors
2. Should address all forms of substance use and/or abuse, in combination or alone, including the underage use of legal substances (e.g., alcohol or tobacco); the use of illicit drugs (e.g.,

heroin or marijuana); and the inappropriate use of prescription medications, substances legally obtained (e.g., inhalants), or over-the-counter drugs.

3. Should speak to the type of substance abuse problem in the local community, strengthen identified protective factors, and target risk factors that can be modified.
4. Should be tailored to address risks to audience characteristics or specific populations, such as gender, ethnicity, and age to improve program effectiveness.
5. If family based, should improve family relationships including bonding and incorporate practice in developing, discussing, and enforcing family policies on substance abuse; training in substance information and education; and parenting skills.
6. Might be designed to intervene as early as preschool to address risk factors for substance use and/or abuse, such as poor social skills, aggressive behavior, and academic difficulties.
7. If designed for elementary school children, should target improvement of social-emotional and academic learning to address risk factors for substance abuse, such as academic failure, early aggression, and school dropout. The educational component should focus on the following:
  - academic support, especially in reading;
  - communication;
  - emotional awareness;
  - self-control; and
  - social problem-solving.
8. If designed for middle school/junior high or high school students, should enhance academic and social competence with the following :
  - communication;
  - substance resistance skills;
    - reinforcement of antidrug attitudes; and
    - strengthening of personal commitments against substance abuse.
  - peer relationships;
  - self-efficacy and assertiveness; and
  - study habits and academic support.
9. If aimed at the general public at key transition points, such as transition from elementary school to middle school, can produce beneficial effects even among high-risk children and

families. These types of interventions do not single out risk populations and thus reduce labeling and increase bonding to school and community.

10. If community based and a combination of at least two effective programs, they can be more effective than a single program alone.
11. If community based and focused on populations in multiple settings, e.g., faith-based organizations, schools, and clubs, they are most effective when they present community-wide messages in each setting that are consistent.
12. Should retain core elements of the original research-based intervention when communities adapt programs to match their needs, differing cultural requirements, or community norms.
13. Should be long-term and provide repeated interventions (i.e., booster programs) to reinforce the original prevention goals. It has been shown that gains from middle school prevention programs diminish if there are no follow-up programs in high school.
14. Should include teacher training on effective classroom management practices, such as rewarding appropriate student behavior. These techniques help to enhance academic motivation, achievement, positive behavior, and school bonding in students.
15. Demonstrate the greatest effectiveness when they employ interactive techniques such as parent role-playing and peer discussion groups that allow for active involvement in learning about substance use and/or abuse and reinforcing skills.
16. If research-based, they can be cost-effective. A savings of up to \$10 in substance abuse has been observed for each dollar invested in prevention (NIDA, 2003).

NIDA's principles for prevention are based on longitudinal research studies on the origins of substance use/abuse behaviors as well as the common elements of effective prevention programs. In sum, the principles affirm:

- Prevention programs should reduce or reverse risk factors and enhance protective factors.
- Prevention programs should be tailored to address risks targeted to audience characteristics or to the whole population.
- Prevention programs should be long-term, incorporating repeated interventions such as booster programs to reinforce the original prevention goals (Medina-Mora, 2005).

## Levels of Prevention

The three types of prevention are:

- **Primary** – At this level, at-risk individuals are helped to avoid developing addictive behaviors (NIDA, n.d.) so new cases are prevented (Kane & Ballue, 2013). This is the level where every reasonable effort is made to stop substance abuse/use/misuse from happening in the first place (Duncan & Gold, 1982). Primary care physicians are highly encouraged to reinforce this level of prevention efforts. Youth might be encouraged to seek out and/or



participate in educational and informational opportunities that address the consequences of tobacco and/or substance use. If programs such as Students Taught Awareness and Resistance (STAR) are operating in the young person's school, he or she might be encouraged to participate. These programs teach skills that help young people avoid high-risk activities. School based programs that involve youth supports such as peers, family, and community, tend to raise the level of effectiveness (NIDA, n.d.). Such programs might be referred to as multiple-component programs (Medina-Mora, 2005).

Some experts have recommended using the Problem Oriented Screening Instrument for Teenagers (POSIT) to screen for substance use and development risk factors in youth (NIDA, n.d.). It can be administered to youth 12 to 19 years of age and is available from the National Clearinghouse for Alcohol and Drug Abuse Information (NIDA, n.d.). However, the POSIT is lengthy (i.e., 139 items) and there is no computerized administration or scoring. Reliability estimates are acceptable, though lower for males on two of the subscales (Knight, Goodman, Pulerwitz, & DuRant, 2001). Screening should assist with the identification of risk factors, which falls under primary prevention (Kane & Ballue, 2013).

This type of prevention should be considered for adults who might be entering or involved in risky situations, e.g., the adult is in or planning to enter a close relationship with an individual who abuses alcohol or other substance, as well. It is also imperative that women of childbearing potential are reminded about the extreme risks associated with substance use and/or abuse during pregnancy (NIDA, n.d.).

Because of the potential impact of this level of prevention, it has been said that its priority needs to be raised. The 2013 budget of the Substance Abuse and Mental Health Services Administration (SAMHSA) for treatment was nearly four times the prevention budget, e.g. In dollar amounts, the 2013 SAMHSA treatment budget was \$1,813 million, compared to \$470 million for the prevention budget (Kane & Ballue, 2013). Additionally, this level of prevention would reduce the amount of dollars spent on "preventable law enforcement, health care, crime, and other costs" (NIDA, 2007)

- **Secondary** – This level of prevention involves uncovering potentially harmful substance use before onset of overt problems or symptoms (NIDA, n.d.). Here new cases are identified very early and typically before the affected individual notices that there may be a problem. At this level, the clinician would screen for the disease and help the affected individual seek out appropriate resources (Kane & Ballue, 2013). This level where early treatment occurs (Duncan & Gold, 1982).
- **Tertiary** – Treatment of the medical consequences of substance abuse and facilitation of enrollment into treatment to minimize further disability is the aim of this level of prevention (NIDA, n.d.). Rehabilitation as well as prevention of disability or death is the aim of this level of prevention (Duncan & Gold, 1982).

## Preventive Interventions

These interventions, as described in the 2009 *Preventing Mental, Emotional, and Behavioral Disorders among Young People: Progress and Possibilities*, were classified based on the people they aim to reach. It should be noted that most preventive interventions are aimed at young people because earlier messages do a better job of delaying or preventing the onset of substance use and/or abuse.

**Universal preventive interventions** focus on a population at large (Kane & Ballue, 2013; Medina-Mora, 2005). For example, using direct messaging to women or those who might influence women addressing elimination or reduction of alcohol consumption during pregnancy fits this type of preventive intervention. There are likely many pamphlets, videos, public service announcements (PSAs), pins, and buttons to communicate the message. There may even be classes for children, educating them on the benefits of alcohol avoidance (Clarren & Salmon, 2010). **Selective**

**preventive interventions** are targeted toward specific individuals or groups (Kane & Ballue, 2013).

The risk of developing a substance use disorder (SUD) for these targeted individuals or groups is significantly higher than average. These individuals or groups are at imminent or lifetime risk of developing an SUD (Medina-Mora, 2005). Motivational interviewing and brief interventions as incorporated in SBIRT that encourage change in risky substance use patterns are examples of such interventions (Clarren & Salmon, 2010). **Indicated preventive interventions** are aimed at extremely high-risk persons with early signs, symptoms, or biological markers that are precursors but not yet diagnosable (Kane & Ballue, 2013).

### Examples of Universal Prevention:

Community policies that promote access to early childhood education and education for physicians on prescription drug misuse and preventive prescribing practices are examples of universal prevention (CAPT, 2012).

One program that fits universal prevention description is **Guiding Good Choices (GGC)**.

Formerly known as Preparing for the Drug-Free Years, the curriculum educates parents on how to strengthen bonding in their families and reduce risk factors. The parents are engaged in five, two-hour sessions that focus on setting clear expectations, monitoring behavior, and maintaining discipline; family involvement and interaction; and other bonding and family management approaches (NIDA, 2003).

### Examples of Selective Prevention:

Providing peer support groups for adults with a history of substance abuse or prevention education for new immigrant families living in poverty with their young children are examples of selective prevention (CAPT, 2012). **Focus on Families (FOF)** is a notable selective program. Designed for parents receiving methadone treatment and their children, the program seeks to reduce parents' use of illegal substances and teaches family management skills to reduce their children's risk for future drug abuse. It has been demonstrated to show early reduction in family-related risk factors with an overall trend toward positive program effects on child outcomes (NIDA, 2003).

### Examples of Indicated Prevention:

Among indicated prevention strategies are screening, consultation, and referral for families of older adults admitted to emergency departments with potential alcohol-related injuries, as well as information and referral for young adults who violate community and/or campus policies on alcohol and drugs (CAPT, 2012).

**Project towards No Drug Abuse (Project TND)** is an indicated prevention intervention. It targets young people of high school age who attend traditional or alternative high schools. This program is designed to prevent the transition from drug use to drug abuse through the consideration of developmental issues faced by older youth (NIDA, 2003).

Additionally there are *tiered* approaches to substance abuse prevention. It is believed that this approach to service delivery provides individuals a better understanding of the linkages between different parts of the system, relative to level of competence/sophistication and need (TADPEMDG, 2010). Many tiered programs incorporated all three levels of intervention. An example is the **Adolescent Transitions Programs (ATP)**. Designed to provide prevention services to students in middle and junior high school and their parents, ATP includes all three levels of prevention. The universal level is directed to parents of all youth in a school and shows up as a *Family Resource Center*. The *Family Check-Up* is the selective intervention that offers both family assessment and professional support. The indicated level yields direct professional help to the family. Some tiered approaches incorporate only two of the three intervention levels (NIDA, 2003).

## Prevention Strategies Unique to Alcohol.

The preconception period is the time that child-bearing women should be screened for alcohol use and/or abuse and, if necessary, offered brief interventions and/or referral to treatment to reduce or completely stop alcohol consumption. No evidence-based studies even hint that any amount of alcohol use is safe during pregnancy, so educating and intervening early is critical (Keegan, Parva, Finnegan, Gerson, & Belden, 2010). Social regulations have demonstrated effectiveness as prevention strategies. Especially effective has been measures

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Social regulations have demonstrated effectiveness as (alcohol) prevention strategies (Medina-Mora, 2005).

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that limit the availability of alcohol through establishment of a minimum legal age for consumption, e.g. Regulations on driving and drinking have also shown effectiveness, including institution of sobriety check points and random breath testing. Regulation of promotion, which includes control of content or

advertising bands have some effect if they are monitored and enforced. Persuasion and education through the use of warning labels, e.g., have shown changes in attitudes and knowledge, though the effect on drinking has not been sustained. Integrated approaches appear to be most effective (Medina-Mora, 2005).

## Environmental Prevention.

Many of the prevention approaches aimed at delaying or preventing alcohol use fall under the rubric of environmental prevention. This form of prevention employs policy interventions to create an alcohol environment that supports safe, healthy behavior. Research over several decades demonstrates that these type of policy reforms work. They have been especially successful in reducing problems associated with youth drinking (AlcoholPolicyMD.com, 2005).

The following are examples of environmental prevention approaches:

- Decreasing the number of alcohol outlets in a community.
  - ✓ Reduces the rates of alcohol-related youth violence

- Holding retailers liable for damage inflicted on individuals by underage and/or intoxicated patrons.
  - ✓ Responsible server practices are promoted and alcohol-related crashes are reduced
- Increasing taxes on alcohol and reducing discount drink specials
  - ✓ Reduces hazardous and heavy drinking among high school and college students
- Increasing enforcement of laws prohibiting sales to underage drinkers
  - ✓ Reduces access to alcohol by young people
- Increasing the minimum legal drinking age to 21
  - ✓ Reduces alcohol-related motor vehicle crashes involving young people
- Reducing the amount of youth exposure to alcohol advertising and increasing the number of alcohol counter-ads
  - ✓ Positively impacts beliefs and intentions young people have regarding alcohol use and may affect their decisions about drinking (AlcoholPolicyMD.com, 2005)
- Reduce the number of public settings where drug use is occurring
  - ✓ Directed patrols, proactive arrests, and problem-solving at high-crime “hot spots” have served to reduce crime associated with substance use.
- Reduce the availability of drug paraphernalia in retail alcohol outlets
  - ✓ This effort has shown to be effective in ensuring merchant compliance with existing laws (Sonoma County Department of Health Services, 2007).

Environmental approaches are typically implemented at the local level in response to community pressure and concern for action. These strategies serve to complement rather than replace strategies that target individual behavior (e.g., social norms and other educational programs). Environmental approaches enhance individually based strategies, creating a social climate that reinforces the educational messages (AlcoholPolicyMD.com, 2005).

The community coalitions program is one through which Substance Abuse Prevention Coalitions (SAPCs) have demonstrated their understanding of the Strategic Prevention Framework (SPF) and the capacity to complete a comprehensive community plan that includes: an Assessment of Need; Capacity Assessment; Planning Process; Implementation Plan; and Evaluation Plan as described by the SAMHSA’s SPF process. Environmental strategies incorporate prevention efforts aimed at changing or influencing community conditions, standards, institutions, structures, systems and policies. The TDMHSAS utilizes the SPF to assist community coalitions and prevention providers in developing the infrastructure needed for community-based, public health approaches that can lead to effective and sustainable reductions in alcohol, tobacco and other drug (ATOD) use and abuse (S. Cooper, June 24, 2016, personal communication).

## Prevention Resources

### National Substance Abuse Prevention Month.

The month of October was designated through Presidential Proclamation as national Substance Abuse Prevention Month in 2011. This was the first time for such a designation and allowed for a full-month observance of the role that substance abuse prevention plays in promoting healthy and safe communities. This month is a time of tribute to everyone that works to prevent substance abuse in communities. It further is a time for individuals to rededicate themselves to building a safer, drug-free country (ONDCP, n.d.).

### National Prevention Week.

This time is set aside to increase public awareness and action around substance abuse. The goals are: 1) foster collaboration and partnerships with national and federal entities dedicated to behavioral and public health; 2) disseminate and promote quality behavioral health publications and resources; and 3) involve communities in implementing prevention strategies while raising awareness of behavioral health issues (SAMHSA, 2014).

The third week in May has been set aside each year. The timing allows schools to take part in prevention-themed events in advance of the end of the school year, thus giving the opportunity to raise awareness for students across all ages. Youth drug use, especially alcohol, cigarette, and marijuana use, spikes between spring and summer so this week is a pivotal time to provide education to the young people and their families. Communities are asked to get involved in this week. Provide health fairs, block parties, educational assemblies, town hall meetings—the list can go on and on—to help raise awareness about the importance of preventing substance use/abuse (SAMHSA, 2014).

### *"I Choose" Project.*

During National Prevention Week each year, individuals get to “choose” how to be a positive example, make a difference, and inspire other people. ***And it's easy to do.*** The individual takes a picture of himself/herself holding a sign showing a personal message about why he or she believes substance abuse prevention is important. Then the person should send the photo/message to [NewMedia@samhsa.hhs.gov](mailto:NewMedia@samhsa.hhs.gov). The following information should be included in the message:

- Name
- State
- Zip code
- The "I Choose" message with the individual's photo.
- Optional: Include an organizational name.

When the photo/message is received, SAMHSA will review it for posting to the ["I Choose" photo gallery](#). Make certain that the photo/message does not violate conditions set forth for submission (SAMHSA, 2014).

## **Coalition for Healthy and Safe Campus Communities (CHASCo).**

The Coalition for Healthy and Safe Campus Communities (CHASCo) is a prevention service designed to address the problem of high-risk drinking among college students and young adults in the state. According to the National Institute on Alcohol Abuse and Alcoholism's (NIAAA's) Update on College Drinking report, these students continue to demonstrate disturbing increases in unhealthy and binge drinking driving while intoxicated, and alcohol-related injuries and deaths. The report also highlighted the fact that college students continue to put themselves at risk with their level and frequency of alcohol consumption. Moreover, college students that do not drink are still exposed to negative alcohol-use consequences, including assaults, increased traffic crashes, property damage, and other crimes (TDMHSAS, 2013).

CHASCo's vision is to be recognized nationally as a model for effective statewide coalitions of institutions of higher education that address campus safety and prevention issues. They proactively address these issues by providing high-quality consultation and training, research support, technical assistance, and policy development to member institutions. Further, CHASCo actively seeks partnerships with community and state agencies to assist campuses in having a variety of options in alignment with their alcohol, substance, and violence prevention efforts (CHASCo Web site, n.d.).

Prevention services are provided at various campuses across the state—public as well as private, four-year versus two year, and in each of the three grand regions. Funding is provided through TDMHSAS (TDMHSAS, 2013).

## **National Youth Anti-Drug Media Campaign.**

This campaign was established by Congress in 1998 to prevent and reduce youth drug use. Originally there were two distinct areas of focus: a teen-targeted Above the Influence (ATI) Campaign, and a young adult-targeted Anti-Meth Campaign. The campaign was later redirected and expanded to focus on marijuana use (GAO, 2006). Federal oversight has ceased and the campaign is currently affiliated with the non-profit *Partnership for Drug-Free Kids* (Abovetheinfluence.com, n.d.).

### ***Above the Influence (ATI).***

This brand was created to strengthen the anti-drug beliefs of young people. It was designed to speak to teens, encouraging them to live “above the influence” of substances, including alcohol, and to reject the use of any substance that slows or hinders reach of their life goals. Early reports about the effectiveness of the ATI media campaign were not favorable. Those results indicated that no campaign exposure effects were found on rates of quitting or use for prior users of marijuana (GAO, 2006). Hence, an ATI media campaign re-launch occurred in 2010. This campaign was much broader in scope and incorporated national-level television, Internet advertising, and a strong online presence through an ATI Facebook page, [AboveTheInfluence.com](http://AboveTheInfluence.com), and the [Above the Influence \(ATI\) YouTube channel](#). More than 75 percent of young people said this re-launched message spoke to someone like them, regardless of gender, ethnicity, or race. Results from the re-launch were also more positive. Young people in the new ATI campaign were observed to be less likely to initiate use of marijuana compared to those who had not been exposed to the campaign. Moreover, the young people who viewed the ads were more likely than their peers to say that marijuana



use was not consistent with being independent and autonomous, and that it would interfere with their aspirations and goals (ONDCP, 2012).

The *Anti-Meth Campaign* was developed through comprehensive research and testing with members of the target audience. This campaign continues to be viable through print, TV, radio, and online anti-meth advertising in areas of the country hardest hit by meth. A mobile/texting component provides linkages to local resources. Mobile SMS (or “text”) codes have been added to out-of-home methamphetamine ads. Those viewing the ads can use their mobile phones to send a text message and receive a reply with information and links to local methamphetamine prevention and treatment resources. Research has shown stronger anti-methamphetamine beliefs for adults 18-35 years of age with more ad exposure compared to adults with less exposure (ONDCP, 2011).

All messaging served as vital prevention resources. The Media Campaign used paid advertising to ensure effective media placement of messages and required media outlets to “match” each paid advertisement placement with a donated (or free) placement (ONDCP, 2011).

## **National Prescription Drug Take-Back Day.**

This event is an initiative of the Drug Enforcement Administration (DEA) that provides safe, responsible, and convenient ways to dispose of over-the-counter and prescription drugs using a variety of designated locations. The initiative further is designed to educate the general public on prescription drug abuse and misuse (SAMHSA News Release, 2014). Among items appropriate for take back are pet medications; medicated ointment, lotions, or drops; prescriptions; liquid medications (in leak-proof containers); over-the-counter medications (if liquid, use leak-proof containers); and pills in any packaging, including plastic containers, glass bottles, plastic bags, etc. (TDMHSAS, n.d.a).

Held twice yearly, National Prescription Drug Take-Back Day helps raise awareness around the permanent prescription-drug disposal boxes that have been established around the nation. As of February 24, 2016, there were 155 permanent prescription drug disposal boxes located at law enforcement facilities in 85 counties across the state. A list of permanent locations can be found by visiting the following Web link at the Tennessee Department of Mental Health and Substance Abuse Services (TDMHSAS): [http://tn.gov/assets/entities/behavioral-health/sa/attachments/Tennessees\\_Permanent\\_Prescription\\_Drug\\_Take-Back\\_Locations.pdf](http://tn.gov/assets/entities/behavioral-health/sa/attachments/Tennessees_Permanent_Prescription_Drug_Take-Back_Locations.pdf) (TDMHSAS, 2016a; TDMHSAS, 2016b).

## **Coalitions**

The TDMHSAS Office of Prevention Services funds a total of 45 anti-drug coalitions across the state, 43 community-based and two statewide coalitions (TDMHSAS, n.d.b;

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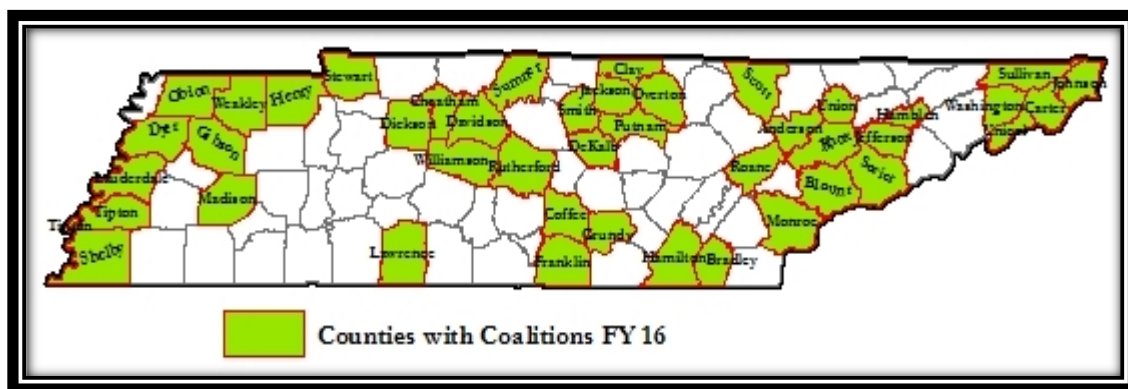
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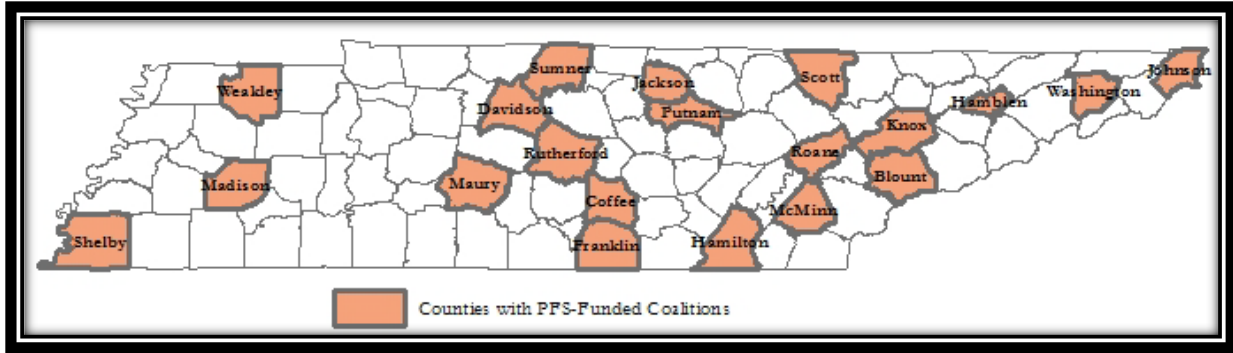
TDMHSAS, 2016a; TDMHSAS, 2016b; thechattanooga.com, 2016) [Bradley County and Polk County share a coalition (the chattanooga.com, 2016.)]. Coalitions assemble individuals from diverse groups to brainstorm and plan effective solutions in reaching the goal of safe, healthy, drug-free communities (TDMHSAS, n.d.b). These coalitions focus on environmental prevention strategies, such as public awareness campaigns, policy development and work with law enforcement. The goal is to create community environments where people are less likely to abuse or misuse substances. Substances of focus to the state’s prevention coalitions include prescription drugs, alcohol, and tobacco (TDMHSAS, 2014). Strategies used by coalitions to effect change in communities include the following:

- Change or modify community policies to discourage negative behaviors and promote positive behaviors.
- Change the environment or the physical design of space to encourage or discourage targeted behaviors.
- Increase barriers to substance abuse and misuse and reduce access to substances.
- Increase incentives for behaviors that should be encouraged while increasing penalties for behaviors that should be discouraged.
- Increase prevention skills among coalition members and staff, service providers, community members, law enforcement, educators, and young people.
- Provide information that enhances understanding of negative consequences of substance use and abuse and positive impacts on substance abuse prevention efforts.
- Provide support to organizations or individuals to take action (TDMHSAS, 2014).

Coalitions funded for the 2016 fiscal year (FY) are shown in the map below.



Some coalitions are subrecipients of the state’s current Partnership for Success (PFS) grant funded through the Substance Abuse and Mental Health Services Administration (SAMHSA). The map below shows the location of funded PFS coalitions:



The PFS project is aimed at reducing alcohol binge drinking among 14-25 year olds. Through the project, participating Community Prevention Coalitions (CPCs) were to implement evidence-based and emerging practices to positively impact the policies, practices and attitudes that support unsafe alcohol consumption and create a hazard to public safety in the state. The project's goals are to reverse the state's upward trend in binge drinking; prevent the onset and progression of substance abuse among 14-25 year olds; strengthen prevention capacity and infrastructure at the state and county levels; and leverage, redirect, and realign Tennessee's funding streams for prevention services (S. Cooper, June 24, 2016, personal communication).

## Early Intervention

Early intervention is included in the scope of prevention, focusing on persons that have experimented with substances but are not severely dependent. Such individuals can be re-educated through a variety of learning interventions (Medina-Mora, 2005). Thus, early intervention is a strategic activity within the risk-focused prevention framework where individuals at risk are identified, observed, assessed, and referred to intervention and/or treatment, as necessary (Deed, 2007). Early treatment interventions such as mandatory treatment for drivers who continue to drink and drive, for example, have proven effective (Medina-Mora, 2005).

Typically persons who might benefit from early intervention have not yet spun out of control in their substance use. They have likely encountered negative consequences as a result of their involvement with substances, such as dealing with a first-time driving-under-the-influence (DUI) charge or minor possession charge, however. The early intervention is employed in an attempt to reduce the probability of more serious substance use behaviors (SAMHSA/CSAT, 1999).

## Screening, Brief Intervention, and Referral to Treatment (SBIRT)

Screening, Brief Intervention, and Referral to Treatment (SBIRT) is perhaps the most popular buzz word associated with early intervention. It is a public health approach to the delivery of early intervention (and treatment services) for individuals with substance use issues, including those at risk (SAMHSA/SBIRT, 2014).

In the 2001 landmark report, "*Crossing the Quality Chasm: A New Health System for the 21st Century*", the Institute of Medicine (IOM) specifically cited Screening, Brief Intervention, and Referral to Treatment (SBIRT) as a promising practice (SAMHSA/HRSA/CIHS, 2013). Today SBIRT has

achieved evidence-based status. It is used to identify, reduce, and prevent issues with use, abuse, and dependence on alcohol and illicit drugs. The model promotes community-based screening for risky health behaviors, including substance use. It consists of three major components:

- **Screening** – Assessment of individuals’ risky substance use behaviors using standardized screening tools

This component provides a quick and easy way to identify persons who use substances at hazardous or at-risk levels and who many already have a substance use disorder (SUD). The screening tool provides specific information and feedback to the individual about his or her substance use. Typically the process starts with the use of one to three screening questions. If the individual obtains a positive screen of one of the instruments, he or she is then given a longer alcohol or substance use measure that involves the use of a standardized risk assessment tool such as Alcohol Use Disorders Identification Test (AUDIT) or Drug Abuse Screening Test (DAST)-10. The questions and instruments are easily administered and provide self-reported information that can be scored easily (SAMHSA/HRSA/CIHS, 2013). In our state, the Patient Health Questionnaire (PHQ)-4 is also administered to identify any co-occurring anxiety and/or depressive issues (A. McKinney-Jones, personal communication, August 5, 2014).

- **Brief Intervention** – Engagement of individuals that show risky substance use behaviors in brief conversation, providing feedback and advice

The brief intervention is designed to motivate individuals to change their behavior(s) and prevent the progression of substance use. During the intervention, patients are:

- Given information about their substance use based on their risk assessment scores.
- Advised in clear, respectful terms to reduce or abstain from substance use.
- Encouraged to set goals to reduce substance use and to identify specific steps that will help them reach those goals.
- Taught behavior change skills that will decrease substance use and associated negative consequences.
- If necessary, given a referral for further care (SAMHSA/HRSA/CIHS, 2013).

Typically brief interventions are used with individuals reporting less severe alcohol or substance use who are not presently in need of a referral to additional treatment and services. Only minimal training is required to conduct these interventions (SAMHSA/HRSA/CIHS, 2013). Brief interventions involve counseling sessions that last between five and 15 minutes. They are designed to enhance an individual’s awareness of his or her alcohol and/or drug use and its consequences, with the intention of motivating the individual to reduce risky drinking or drug-seeking behaviors and getting treatment (APHA, 2008). In the case of individuals with addictions, more intensive interventions may be needed. Conversations around intensive intervention are similar to that of the brief interventions but the sessions tend to be longer (20-30 minutes). It is possible that multiple sessions, referral to an addiction treatment program, and/or the provision of pharmacological therapy may be necessary (SAMHSA/HRSA/CIHS, 2013).

- **Referral to Treatment** – Provision of a referral to therapy or other treatments to individuals whose screening results suggest the need of additional services (CMS, 2013).

This component includes a more advanced treatment option so the individual is referred to a higher level of care. Often this care is provided at addiction treatment centers. The referral to treatment process consists of helping individuals to access treatment, selecting treatment facilities, and facilitating the navigation of any barriers such as cost of treatment or lack of transportation or child care that would hinder them from receiving treatment in this type of treatment setting. In order for this process to occur smoothly, the referring agent must initially establish and cultivate relationships with specialty providers, and then share pertinent patient information with the referral provider. Handling the referral process properly and ensuring that the individual receives the necessary care coordination and follow-up support services are critical to the treatment process and to facilitating and assisting in maintenance of recovery (SAMHSA/HRSA/CIHS, 2013).

As an early intervention, SBIRT targets individuals with moderate to high risk of substance use, providing effective strategies for intervention before there is a need for more extensive or specialized treatment. The approach is not designed for individuals with more severe substance use or those who meet the criteria for a diagnosis of Substance Use Disorder (SUD) (CMS, 2013).

The goal of SBIRT is to prevent the unhealthy consequences of alcohol and substance use for persons whose use may not have reached the diagnostic level of SUD and to assist those with the disease of addiction enter and stay with treatment. SBIRT can be used easily in a variety of settings, including primary care settings, to systematically screen and deliver services to persons who may not be seeking help for a substance use problem, but whose alcohol consumption or substance use may cause or complicate their ability to successfully handle family, work, or health issues (CMS, 2013). Since its inception in 2003, 19 percent of screened individuals have required brief intervention, brief treatment, or referral to specialty treatment services (SAMHSA/SBIRT, 2014).

Despite its promise especially in reaching pregnant women who otherwise may go unidentified, the literature has noted that implementation of the brief intervention component of SBIRT in real-world settings is very slow. Some studies have suggested that doing all recommended screening and prevention SBIRT tasks would take a primary care provider more than four hours per working day, time not in the schedule of primary care physicians. As a result, few physicians, including obstetricians, actually fully implement the recommended brief intervention strategies. To counteract these problems, a computer-delivered intervention has been proposed. Brief education that emphasizes current information regarding negative outcomes of both mother and newborn is presented as part of the intervention. Pilot outcomes were promising, showing reports of reduced substance use for the mothers and higher birth weights for the newborns. Further research is still warranted for computer-based delivery of brief interventions (Tzilos, Sokol, & Ondersma, 2011). In Tennessee, licensed alcohol and drug abuse counselors (LADACs), social workers, and/or master's level counselors may be used to complete SBIRT activities.

There are manifold resources to educate prospective providers about SBIRT as well as assist them in implementing the intervention (SAMHSA/HRSA/CIHS, 2013). A few of them are listed below.

- **SBIRT App.** This tool was developed at Baylor College of Medicine to support the use of SBIRT by physicians, other healthcare workers, and mental health professionals. Free to download, it provides evidence-based questions to screen for use of alcohol and other substances including tobacco. The app includes a screening tool to further evaluate specific

substance use, if warranted. Also included are steps to complete a brief intervention and/or referral to treatment for the client based on motivational interviewing. The app can be downloaded from <https://itunes.apple.com/us/app/sbirt/id877624835?mt=8>.

- **TAP 33: Systems-Level Implementation of Screening, Brief Intervention, and Referral to Treatment (SBIRT).** This TAP provides a description of core elements of screening, brief intervention, and referral to treatment (SBIRT) programs for individuals with or at risk for substance use disorders. The TAP further includes general administrative and managerial information relevant to implementing SBIRT services. Among the covered information are implementation models, challenges and barriers to implementation, and issues around cost and sustainability. The document can be downloaded as a PDF, at no cost, from <http://store.samhsa.gov/shin/content//SMA13-4741/TAP33.pdf>.
- **Alcohol Screening and Brief Intervention for Youth: A Practitioner's Guide.** Developed by NIAAA, this guide introduces a quick, simple, empirically derived tool for identifying young people at risk of alcohol-related problems. Designed for clinicians who work with youth between the ages of nine and 18, the guide can help detect risk early using the first tool to include a “friends” drinking question. Research has identified friends as an important risk factor in drinking behaviors of youth. The guide was produced in collaboration with the American Academy of Pediatrics (AAP), clinical researchers, and health practitioners. It can be accessed from <http://pubs.niaaa.nih.gov/publications/Practitioner/YouthGuide/YouthGuide.pdf>.

## **SBIRT in Tennessee.**

Our state's SBIRT program is funded by a Substance Abuse and Mental Health Services Administration (SAMHSA) grant to the Tennessee Department of Mental Health and Substance Abuse Services (TDMHSAS) (TDMHSAS, 2014). The main goals of SBIRT Tennessee are to: 1) identify individuals using substances at risky levels and 2) implement SBIRT services for these individuals in primary care and community health settings. The project aims to expand and enhance the state's continuum of care for substance misuse services and reduce unhealthy levels of alcohol and substance consumption and associated negative consequences, increase abstinence, and reduce costly health care utilization, promote sustainability and behavioral health information technology (SBIRT Tennessee Evaluation Report Summary, personal communication, 2014).

As of August 1, 2015, SBIRT services were being implemented at East Tennessee State University (Bristol, Johnson City, and Kingsport TN), Meharry Medical College (Nashville, TN), Neighborhood Health Services (Madison, TN), and a variety of Tennessee National Guard sites in middle and east Tennessee. These implementation sites universally pre-screen all adult patients/soldiers at least once annually. All patients/soldiers seen by a participating site are eligible for a full screen if pre-screen results indicate harmful levels of alcohol use and/or abuse of other drugs (SBIRT Tennessee Evaluation Report Summary, personal communication, 2015). Only validated screening tools can be used in SBIRT Tennessee. Among the validated instruments include the Alcohol Use Disorders Identification Test (AUDIT) for adult alcohol use; the Drug Abuse Screening Test (DAST-10) for adult substance use; and the CRAFFT for adolescent alcohol and substance use (State of Tennessee SBIRT Guidelines, 2010). Also included in the full screen is the four-item, Patient Health Questionnaire for Depression and Anxiety (PHQ-4). The four-item tool combines two validated two-item screeners. Full screens are administered by a Behavioral Health Specialist (BHS) located at each implementation site. If the patient/soldier has a moderate



or high risk score on the full screen assessment, he or she is categorized, for the purposes of services, into one of three groups (SBIRT Tennessee Evaluation Report Summary, personal communication, 2014; SBIRT Tennessee Evaluation Report Summary, personal communication, 2015):

1. Brief Intervention
  - ✓ This strategy is conducted by the BHS utilizing motivational interviewing techniques focused on raising an individual's awareness of his or her substance use and its consequences to motivate a positive behavioral change.
2. Brief Treatment
  - ✓ Also conducted by the BHS utilizing motivational discussion and patient/soldier empowerment. The process includes patient goal-centered assessment and education as well as development of problem-solving and coping skills within a supportive social environment.
3. Referral to Specialty Treatment
  - ✓ Patients/Soldiers who require a more intensive level of care are linked to various substance abuse and mental health treatment agencies for a formal diagnosis and possible treatment (SBIRT Tennessee Evaluation Report Summary, personal communication, 2014).

By March 1, 2016, SBIRT Tennessee had screened 39,290 individuals of diverse ethnicity, race, and age across all five sites and the Tennessee National Guard (TNNG). Of the screenings, 82 percent (32,260 screens) were conducted across the five primary care sites. Moreover, the total number represented more than twice the number of persons that SBIRT TN projected to serve by this date, per the request for funding announcement. Almost half of those screened were female (18,578 or 47 percent). Very few patients/soldiers self-identified as Hispanic/Latino (7 percent). The majority (57 percent) were white, followed by 21 percent that identified as African-American. The average age at intake was 42 years, based on an age range from 18 to 100 years old. Close to 20 percent of the 28,819 persons reflected positive prescreens and were recommended to receive the full screen (i.e., AUDIT/DAST/PHQ-4). Slightly more than seven percent was recommended for Referral to Specialty Treatment (C. Brown & B. Hayes, personal communication, June 28, 2016).

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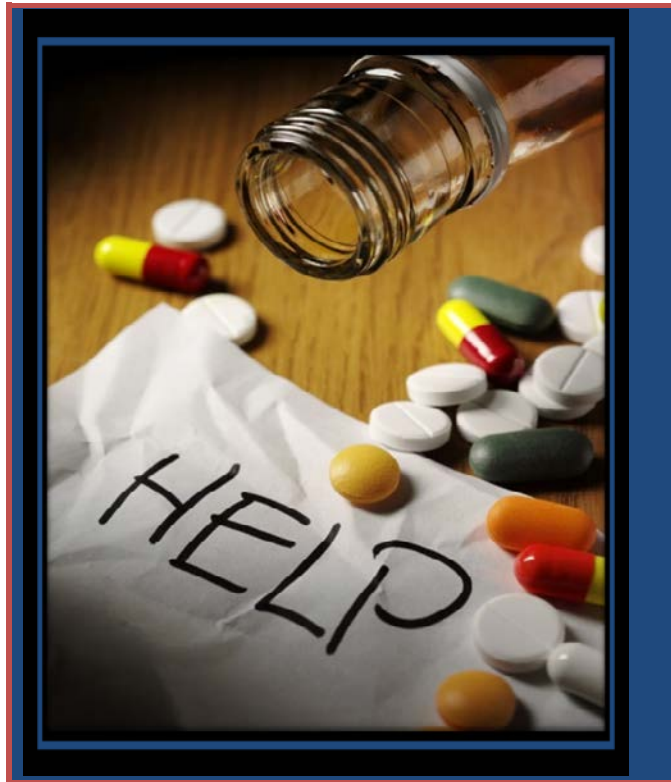
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Department of  
**Mental Health &  
Substance Abuse Services**



8/15/2016

**Substance Use Best Practice Tool  
Guide**

**EVIDENCE-BASED  
TREATMENTS**

Division of Clinical Leadership in Collaboration with the  
Division of Substance Abuse Services

# Evidence-Based Treatments

Despite the call for evidence-based treatment (EBP) practices in substance use (SU) treatments, only a fraction are validated by the most rigorous evidence in the current scientific literature.

Nonetheless, the National Quality Forum (NQF) identified seven core practices for SU treatment that are supported by scientific evidence and merit widespread implementation.

**Practice 1. Screening.** All patients/clients in general and behavioral healthcare settings (including primary care, urgent care, and emergency care) should be screened for alcohol and other drug use/misuse whenever a care encounter provides the opportunity. A selection of EB screening and assessment tools and links are found in this tool guide.

**Practice 2. Initial Brief Intervention.** All patients/clients with a positive screen should receive a brief intervention by a healthcare practitioner trained in this technique. Brief intervention should include assessment and follow-up care, including referral to specialty services and systematic monitoring as needed. Tips on brief intervention can be found in the section on Early Intervention in the *Prevention/Early Intervention* module of this guide.

**Practice 3. Prescription for Services.** Each patient/client assessed and diagnosed with SUDs should receive and sign a written “dosing recommendation” that clarifies the treatment plan, i.e., explicitly prescribes the specific services, initial duration, and quantity of each service. Reassessments should be conducted as necessary and services should match patient needs.

**Practice 4. Psychosocial Intervention.** Evidence-based psychosocial treatment interventions should be initiated for all patients referred to specialty care treatment of SUDs. Examples of EB psychosocial treatments are included in this module, among others.

**Practice 5. Pharmacotherapy.** Pharmacotherapy should be considered for all patients diagnosed with alcohol and/or opioid dependence. EB pharmacological treatments are available for those substance use disorders (SUDs). Such patients/clients should be assessed and, if appropriate and consented to, pharmacotherapy should be initiated.

**Practice 6. Patient Engagement and Retention.** Specialty providers should systematically promote patient/client engagement and improve retention in SUD treatment. EB strategies are included in this tool guide to assist in facilitation of engagement and retention.

**Practice 7. Recovery/Chronic Care Management.** Efforts should be undertaken to engage patients/clients long-term in the management of their care. EB strategies are available in this tool guide that can assist with those efforts.

All treatments included in this module meet the required research rigor and are indeed evidence-based (EB).

## Medication-Assisted Treatments (MATs)

Drug addiction is challenging. Moreover, most substance users have every intention of discontinuing their misuse and/or abuse. In a large number of cases, however, individuals are not able to stop using substances on their own. They need help. Sometimes an individual is able to be successful for a short time, but then he or she will fall back into those old patterns of using. Relapse can occur even if the individual has a strong support system. The reality is that overcoming drug addiction is not an easy feat. It typically takes time to recover. *Further, recovery is a PROCESS, not something that happens in the first decision to be abstinent.* Hence, individuals that truly want to take control of their addiction may need to strongly consider medication-assisted treatment (MAT) AS PART OF THEIR ADDICTION TREATMENT (Chalk & Williams, 2012). **Medication-assisted treatment** (MAT) is a term used to describe the use of pharmacological treatments in individuals with substance use disorders (Chalk & Williams, 2012; CMCS, 2014). It is a direct, individualized service for persons with a substance use disorder (SUD) (Fullerton et al., 2014). In addition to providing pharmacological help, MAT integrates counseling and other supports, especially friends and family, thereby incorporating a whole-person approach to the treatment of substance use disorders (SUDs) (SAMHSA/CSAT, 2011; SAMHSA, 2012b). MAT plus therapy can contribute to lowering an individual's risk of contracting hepatitis C or HIV because the potential for relapse is reduced (CMCS, 2014). Research has shown that these combinations are most effective in the treatment of individuals with SUDs (SAMHSA/CSAT/DPT, n.d.).

Medications can provide several important functions as part of the treatment process. They can help with:

- ✓ **Comforting the individual.** Medications can help make withdrawal symptoms and signs less severe as well as assist the person in being more comfortable during the early days and weeks following quitting substance use. Lessening withdrawal can, in turn, assist in the creation of a context for the person to remain abstinent and continue in treatment rather than return to substance use as a way to relieve withdrawal symptoms.
- ✓ **Reducing cravings.** Appropriate medications serve to alleviate the intrusive thoughts and urges around substance use that may lead the individual with SUDs to return to substances.
- ✓ **Altering effects of the substance(s).** For some of these medications and in certain individuals, these medications eliminate or lessen the effects of substances being used/misused through their own actions in the brain. This action takes away the individual's reason to use the substance of use/misuse in the first place, thereby preventing further relapse.
- ✓ **Retaining the individual in treatment.** Many of the medications have mild but desirable effects sought by individuals with SUD, hence reducing treatment drop out which would interfere with successful recovery (CPDD, n.d.).

At this writing, a variety of medications have been approved by the U.S. Food and Drug Administration (FDA) in the treatment of SUDs: 1) bupropion, nicotine replacement therapy (gum, lozenges, nasal spray, patch, and inhaler), and varenicline for tobacco use disorders (CPDD, n.d.); 2)



### *Evidence-based Treatments*

acamprosate, disulfiram, and naltrexone (oral and injectable) for alcohol use disorders; and 3) buprenorphine, methadone, and naltrexone (oral and injectable) for opioid use disorders (Chalk & Williams, 2012; CPDD, n.d.; SAMHSA-HRSA/CIHS, 2014). In all cases, the decision as to which medication is prescribed should be based on an understanding of the known pharmacology of the drugs, individual preferences and characteristics of the substance user, and ultimately on the clinician's judgment (Chalk et al., & McLellan, 2013). MATs expand the range of treatment options for persons with addiction to substances, yet national reports continue to show extremely low usage rates in community treatment settings (Chalk & Williams, 2012, e.g.).

MAT continues to be substantially underutilized despite findings of cost effectiveness, clinical effectiveness, and significant reductions in use of detoxification and inpatient services. A study conducted by Roman, Abraham, & Knudsen in 2011 found that less than 30 percent of contemporary substance use treatment programs offered MAT and, of those "offering" programs, less than half of eligible patients actually received medications. It seems that several factors contribute to the low uptake of the evidence-based MAT option, including:

- Agency regulatory policy that forbids or restricts MAT use
- Criteria that other therapies be tried first or the "Fail first" policy
- Initial authorization and reauthorization requirements
- Lack of available prescribers
- Lack of support for existing prescribers
- Limits on dosages that can be prescribed (i.e., lifetime or annual medication limits for MAT)
- Minimal coverage for counseling
- Workforce misunderstandings and attitudes about the nature and use of medications (Roman et al., 2011).

MATs have been recognized for their substantial cost savings. For example, individuals with untreated alcohol use disorders (AUDs) use two times as much health care and cost twice as much as persons who received treatment for their AUD. Research also shows that pregnant women who use/misuse substances and receive MAT demonstrate significantly shorter stays in the hospital compared to those who did not receive MAT. Over a three-year time span, medical costs for Medicaid clients engaged in treatment decreased by 33 percent (CMCS, 2014).

## **Tobacco and MAT**

Nicotine is metabolized and eliminated from the body very quickly so the physical part of nicotine addiction can be broken after seven days of abstinence. The part that takes much longer to overcome is the psychological addiction (Densky, 2012). Its use in the form of cigarettes has shown a marked increase, especially among the youngest (less than 20 years of age) and oldest (over 35 years of age) pregnant mothers (Keegan, Parva, Finnegan, Gerson, & Belden, 2010).

Pharmacological treatments are considered a mainstay for smoking cessation. First-line therapies, as recommended by the FDA because of their evidence of effectiveness consist of nicotine replacement therapies (NRT), bupropion, and varenicline (Douaihy, Kelly, & Sullivan, 2013).

- ✓ **Nicotine replacement therapies** (NRTs). Approved formulations of NRTs include nicotine gum, nicotine lozenge, nicotine vapor inhaler, nicotine nasal spray, and the transdermal nicotine patch. NRTs replace the nicotine obtained from smoking to enhance smoking cessation outcomes and prevent withdrawal symptoms. Started on the quit date, success in quitting on the quit date is highly predictive of end-of-treatment success. Use of NRTs is typically short term, but longer term treatment can produce additional benefits for smokers who are severely addicted. They have been shown to be effective on measures of abstinence (i.e., not even a puff) at the end of clinical trials, as well as at later time points, e.g., six and 12 months, compared to placebo. Combination NRTs have been demonstrated to further improve efficacy, for example combining one medication that allows for passive nicotine delivery such as the transdermal patch with another medication that permits ad libitum nicotine delivery such as inhalers, nasal sprays, or gum. The combination method allows smokers that need slow delivery to achieve a constant concentration of nicotine to relieve withdrawal symptoms and cravings, along with a faster-acting preparation that can be administered as needed for immediate relief of breakthrough withdrawal symptoms and cravings. Labels of these products continue to warn individuals about combining them despite evidence of combination effectiveness (Douaihy et al., 2013). It should also be noted that meta-analyses of these products have indicated them to be effective interventions in achieving sustained abstinence from smoking (The Addiction Recovery Guide, 2014).
- ✓ **Bupropion Sustained-Release** (SR). This medication, marketed as Zyban for smokers, has been effective in helping some people stop smoking (Monson, 2013; The Addiction Recovery Guide, 2014). An atypical antidepressant, the medication has been shown to be effective in enhancing quit rates compared to placebo in both short- and long-term follow-up. Some studies have demonstrated outcomes similar to NRT, but unlike NRT, bupropion is taken one to two weeks before the quit date and then continued post-quit date (Douaihy et al., 2013). Treatment has been associated with reductions in cue-induced activation of the prefrontal and limbic brain regions as well improved ability to resist cue-induced cravings. A six-month follow-up is also recommended for smoking cessation maintenance (The Addiction Recovery Guide, 2014).
- ✓ **Varenicline** (Chantix). This partial nicotine agonist is used for a one to two week period while continuing smoking before actual smoking cessation (Douaihy et al., 2013). It became an FDA- approved treatment to help cigarette smokers stop smoking in 2006 (FDA, 2006). The approved course of treatment is 12 weeks, with successful quitters able to continue 12 more weeks to enhance the likelihood of long-term smoking cessation (The Addiction Recovery Guide, 2014). Unlike nicotine that has a short duration of action, varenicline has a relatively long period of action, requiring only twice daily use. The partial stimulation of varenicline reduces cravings and has been demonstrated to enhance chances of successful

quit attempt, compared to attempts involving unassisted smoking cessation (Douaihy et al., 2013). Its effectiveness was demonstrated in six clinical trials, five of which were randomized controlled. Varenicline was shown to be superior to a placebo in helping people quit smoking. Further, it was shown that persons treated with varenicline were more successful giving up smoking than clients treated with bupropion (FDA, 2006).

*In 2012, the FDA issued a warning regarding serious side effects associated with use of varenicline.*

Compared to a placebo group, the group treated with varenicline (Chantix) experienced higher occurrences of major adverse cardiovascular events. Persons being treated with varenicline for smoking cessation are encouraged to contact their health care professional if they experience new or worsening symptoms of cardiovascular disease (The Addiction Recovery Guide, 2014). The medication also has a black box warning due to associations to suicidal behaviors (Ericson, 2014).

### ***Treatment Summary.***

Research studies are continually underway to investigate the benefits of other medications in the treatment of smoking cessation. Anti-smoking vaccines that are given as a series of shots are also still being tested. Results from many of the studies have been promising and safety has been maintained. However, larger studies are needed to demonstrate the efficacy of these treatments before the FDA will approve them for use (ACS, 2014). Stay tuned.

## **Smokeless Tobacco.**

Smokeless tobacco can be defined as tobacco that is not burned. The nicotine in the tobacco, which is addictive, is absorbed through the lining of the mouth. Research has shown that nicotine stays in the blood longer for users of smokeless tobacco than for cigarette smokers (National Cancer Institute, n.d.).

The two main types of smokeless tobacco are chewing tobacco and snuff. Chewing tobacco is typically placed between the cheek and lower lip toward the back of the mouth and can be chewed or held in place. The saliva is either swallowed or spit. Snuff can be packaged dry or moist and may be sold in a variety of different flavors and scents. A pinch or pouch of the moist form is typically placed between the cheek and gums or behind the upper or lower lip. The dry form is sometimes inhaled into the nose (National Cancer Institute, n.d.).

Addiction to smokeless tobacco is as deadly as addiction to cigarette smoking. In fact, many experts will say it is even more dangerous (Densky, 2012; National Cancer Institute, n.d.). As many as 28 chemicals in smokeless tobacco have been found to cause cancer. Moreover the advisory committee to the Surgeon General concluded way back in 1986 that using smokeless tobacco was not a safe substitute for smoking cigarettes. A 2006 panel of experts convened by the National Institutes of Health (NIH) even acknowledged that the range of risks associated with smokeless tobacco products probably varies extensively due to the differing levels of carcinogens, nicotine, and other toxins in the various products (National Cancer Institute, n.d.).

As with cigarette products, smokeless tobacco products must carry warning labels. Further, radio and television advertising is banned. There are new warning labels for these products, which are to be rotated quarterly, that read:

- 
- **WARNING: THIS PRODUCT MAY CAUSE MOUTH CANCER.**
  - **WARNING: THIS PRODUCT MAY CAUSE GUM DISEASE AND TOOTH LOSS.**
  - **WARNING: THIS PRODUCT IS NOT A SAFE ALTERNATIVE TO CIGARETTES (Akoury, 2014).**
- 

Smokeless tobacco has been directly linked to laryngeal, oral, and pharyngeal cancer, as well as esophageal cancer, tooth loss, and gum disease. The use of these products has been on the increase, especially among America's young people (Akoury, 2014; National Cancer Institute, n.d.).

As a preventive measure, the National Spit Tobacco Education Program (NSTEP) provides education on smokeless tobacco use. The organization targets the general public but specifically is aimed at baseball players and their families, groups for whom the use of smokeless tobacco is extremely high. NSTEP is endorsed and supported by both Major League and Little League Baseball (Cheng et al., 2014).

### **Pharmacological Treatments: Smokeless Tobacco.**

Meta-analytic studies have been a primary source of research on the effectiveness of pharmacological treatments for users of smokeless tobacco. However, nicotine replacement therapy (NRT) has been shown to enhance short-term tobacco abstinence rates, as well as to alleviate craving and withdrawal symptoms for users trying to quit using smokeless tobacco. Bupropion sustained release has demonstrated decreases in craving and weakened post-cessation weight gain among users of smokeless tobacco trying to quit. Long-term abstinence rates (i.e., at least six months) have only been demonstrated with the use of varenicline (Chantix) (Ebbert & Fagerstrom, 2012).

On the whole, findings from studies investigating pharmacological treatments for users of smokeless tobacco have not been as promising as desired. They may hold some promise for increasing abstinence rates for users not interested in quitting. Additional investigations of higher dose NRT and combination pharmacological therapies have been recommended to advance the treatment of users of smokeless tobacco (Ebbert & Fagerstrom, 2012).

## **Alcohol and MAT**

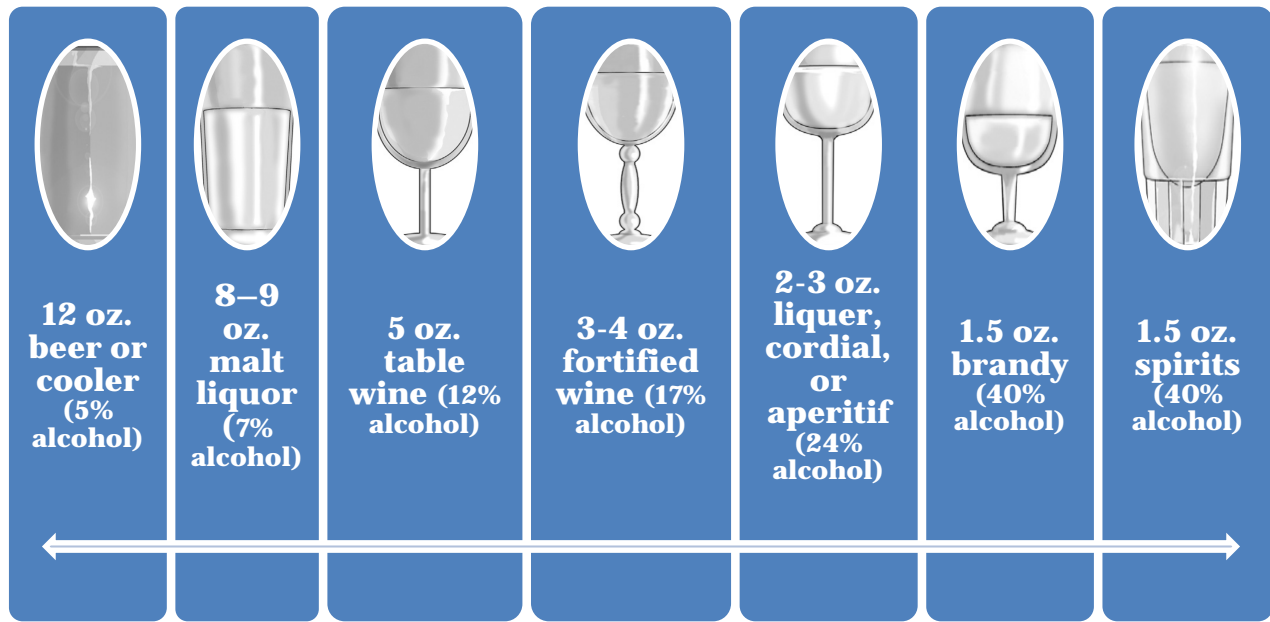
Consumption of alcohol is pervasive in the United States (Pearson, Dube, Nelson, & Caetano, 2009). In excess of 90 percent of adult Americans have consumed alcohol at some point in their lives and nearly 70 percent continue to consume it during adulthood. The majority of adults can drink moderate amounts of alcohol—one drink daily for women and up to two drinks per day for men—and avoid problems related to alcohol consumption. However, 10 to 15 percent of individuals exposed to alcohol come to use/misuse it or become dependent upon it, making alcohol use disorder (AUD) very common (O'Brien, 2012). Recent estimates show as many as 20 percent of patients seen in hospital or primary care setting has a diagnosable AUD (SAMHSA & NIAAA, 2015).

### **What Is “Too Much” Alcohol?**

When drinking causes or elevates the risk of alcohol-related problems or complicates the management of other health problems, drinking has become a problem. Epidemiologic research has shown that women who consume more than three standard drinks in a day (or more than seven per week) and men who consume more than four standard drinks in a day (or more than 14 per week) are at increased risk for alcohol-related problems. Of course, individuals vary in the way they respond to alcohol which means that drinking even at lower levels can be problematic depending on other factors such as coexisting conditions, use of medication, and age. Further, the Surgeon General has urged abstinence for women who are or may become pregnant since 2005 because there is no data on the amount of alcohol that would be safe during pregnancy (NIH/NIAAA, 2007).

### **What Is a Standard Drink?**

In the United States, a standard drink refers to any drink that contains about 14 grams of pure alcohol (1.2 tablespoons or 0.6 fluid ounces). However, many individuals do not know what constitutes a standard drink and thus do not realize how many standard drinks are in the containers in which the drinks are often sold or distributed when purchased. The chart below shows typical standard drink equivalents (NIH/NIAAA, 2007).



Additional examples of standard drinks are provided below. The approximate number of standard drinks in:

✓ **Beer**

- 12 oz. = 1
- 22 oz. = 2

- 16 oz. = 1.3
- 40 oz. = 3.3

✓ **Malt Liquor**

- 12 oz. = 1.5
- 22 oz. = 2.5

- 16 oz. = 2
- 40 oz. = 4.5

✓ **Table Wine**

For **table wine**, the approximate number of standard drinks in

- a standard 750-mL (25-oz.) bottle = 5

✓ **80 Proof Spirits** (hard liquor)

- a mixed drink = 1 or more\*
- a fifth (25 oz.) = 17
- a pint (16 oz.) = 11
- 1.75 L (59 oz.) = 39

\*It should be noted that estimates of the number of standard drinks in mixed drinks made with hard liquor are difficult and a function of the type of spirits as well as the recipe. A mixed drink, hence, can contain from one to three or more standard drinks (NIH/NIAAA, 2007).

## Binge Drinking.

**Binge drinking** constitutes four or more drinks in a single bout for women and five or more for men (Carroll, 2014; SAMHSAS/CBHSQ, 2014a). Moreover, one in every six adults engages in binge drinking, and that plays a substantial role in most alcohol-related deaths (Shute, 2014).

However, alcohol deaths are very preventable, ranking fourth behind smoking, poor nutrition and lack of activity (Shute, 2014). For the combined period of 2010 to 2012, Southern states reported

the lowest rates of underage binge alcohol use and Tennessee was among them (SAMHSA/CBHSQ, 2014a).

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One in six adults engages in binge drinking, and that plays a substantial role in most alcohol-related deaths (Shute, 2014).

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Contrary to popular belief, alcoholics or persons addicted to alcohol, are not the big problem.

Ten percent of all deaths have been

linked to excessive drinking. In fact, it is reported that binge drinking, along with heavy regular drinking, shortened the lives of those who died by 30 years (Carroll, 2014; Shute, 2014).

## Other Drinking.

Drinking at least five drinks on the same occasion on five or more days in the past 30 days is the definition for **heavy alcohol use** (APHA, 2008; SAMHSA/CBHSQ, 2014c). Data from the 2013 National Survey on Drug Use and Health (NSDUH) showed 1.2 percent of adolescents age 12 to 17 as heavy drinkers, based on their alcohol use in the past month. Adults 18 years of age and older represented 6.8 percent of the heavy alcohol users (SAMHSA/CBHSQ, 2014c).

Combined data from the 2011 and 2012 National Survey on Drug Use and Health (NSDUH) showed that of young adults 18 to 25 years of age who used alcohol in the past month, older ages drink alcohol more days than younger ages. The 21-25 year of age group drank 7.5 days per month compared to 5.7 days per month for 18 to 20 year olds. **However**, younger ages drank more drinks per day on they days they drank, with young adults ages 18 to 20 drinking 4.8 drinks and those ages 21 to 25 drinking 3.9 drinks per day (SAMHSA/CBHSQ, 2014b).

Physicians in one study defined **light drinking** as 1.2 drinks per day on average, an amount exceeding guidelines established by the National Institute on Alcohol Abuse and Alcoholism (NIAAA) for at-risk drinking for women (ACOG, 2008).

According to the American Public Health Association (2008), **moderate drinking** can be defined as:

- Up to two drinks per day – Men
- Up to one drink per day- Women or individuals 65 years and older

**Excessive alcohol use** leads to a poorer quality of life, hampered productivity in the workplace, decreased academic performance, and other negative consequences and outcomes. Defined, excessive alcohol use includes alcohol impaired driving, drinking while pregnant, underage drinking, and binge drinking (National Prevention Strategy, 2014). The Centers for Disease Control and



Prevention (n.d.) defined excessive alcohol use as follows: alcohol use by pregnant women, alcohol use by underage individuals, heavy drinkers, and binge drinkers.

## **Medication/Alcohol Interactions.**

Alcohol can interact negatively with medications either by enhancing the effects of the medication (particularly in the central nervous system) or by interfering with the metabolism of the medication (generally in the liver). Many classes of prescription medications can interact with alcohol, including antihistamines, antidepressants, antibiotics, benzodiazepines, barbiturates, muscle relaxants, histamine H<sub>2</sub> receptor agonists, anti-inflammatory agents, opioids, nonopioid pain medications, and warfarin. Negative side effects are likely when herbal preparations and many over-the-counter medications are taken with alcohol (NIH/NIAAA, 2007).

## **Pharmacological Treatments.**

Treatment involving medications or medication-assisted treatments (MATs) for alcohol dependence should be used adjunctively to psychosocial treatments rather than as replacement. This combination has shown to be more effective than either medication or nondrug therapy alone. To the extent that pharmacological therapy reduces craving and helps maintain abstinence, it likely makes individuals with AUD more agreeable to psychosocial interventions (SAMHSA/CSAT, 2009).

A medical management (MM) strategy has been designed specifically to accompany pharmacological therapy for alcohol use disorders (AUDs). MM not only gives structure, but supplies materials to help clinicians offer their clients strategies for taking medications and staying in treatment; support their clients' efforts in changing their drinking habits; provide recommendations to their clients for changing drinking habits; and stay informed about alcohol dependence and pharmacological therapy research and recommendations (SAMHSA/CSAT, 2009).

Three medications have been approved by the United States Food and Drug Administration (FDA) in the treatment of alcohol use disorders (AUDs). These medicines consist of disulfiram, acamprosate, and naltrexone (oral and extended-release injectable). Counseling and other supports should be part of the MAT package (CPDD, 2013; Douaihy et al., 2013; SAMHSA/CSAT, 2009).

### ***Disulfiram.***

Disulfiram, also known as Antabuse®, was the first FDA-approved pharmacological treatment for AUDs. Approval was obtained in 1951. An alcohol-sensitizing or alcohol-aversive agent that initiates an acutely toxic physical reaction when mixed with alcohol, disulfiram causes extremely uncomfortable symptoms such as vomiting, headache, and severe nausea. Research continues to support its establishment as an effective and safe treatment of AUDs in particular client groups (SAMHSA/CSAT, 2009). Individuals having the following profiles are considered good candidates for disulfiram as a pharmacological treatment for AUD:

- Medically appropriate.

*Evidence-Based Treatments*

- Maintain abstinence from alcohol during treatment.
- Have the capacity to fully understand the consequences associated with alcohol use while taking this medication.
- Can receive supervised dosing.
- Are abstinent from alcohol use (i.e., clients must have abstained from alcohol use at minimum 12 hours and/or breath or blood alcohol levels are zero).
- Treatment motivated and committed to total abstinence.
- Have codependence on or current use/misuse of cocaine (SAMHSA/CSAT, 2009).

Under no circumstances should disulfiram be administered to a client that is in a state of alcohol intoxication or without the client’s full knowledge and consent. Neither should disulfiram be used by pregnant women. Not enough is known about the potential risk to the fetus. Clinicians should advise family members and/or other supports about these and other contraindications. The Antabuse® package insert includes a **black box warning** (SAMHSA/CSAT, 2009).

**Trade name:** Antabuse®.

**How taken:** Tablet by mouth once daily (May be crushed and mixed with water, milk, tea, coffee, soft drink, or fruit juice).

**How supplied:** 250 or 500 milligram (mg) tablets.

Source: SAMHSA/CSAT, 2009 (TIP 49)

***Contraindications***

<i>Condition or Circumstance</i>	<i>Treatment Recommendation</i>
Clients with histories of cardiac disease, diabetes mellitus, hypothyroidism, epilepsy, cerebral damage, chronic or acute nephritis, hepatic cirrhosis, or hepatic insufficiency	Use with caution. No evidence exists that clients with preexisting liver disease are more likely to suffer severe liver toxicity from disulfiram.
Clients with hepatitis C	If baseline transaminase levels are normal or only moderately elevated (< 5 times the upper limit of normal), carefully monitor liver function.

<i>Condition or Circumstance</i> (continued)	<i>Treatment Recommendation</i> (continued)
Clients receiving or who have recently received metronidazole, paraldehyde, alcohol, or alcohol-containing preparations (e.g., cough syrups, tonics). Clients exposed to ethylene dibromide or its vapors (e.g., in paint, paint thinner, varnish, shellac).	Do not use until substances are out of client's system.
Adults ages 61 and older	May need to decrease dosage
Children and adolescents	Prescribe with caution. Medication has not been evaluated for safety or efficacy in these populations.

Source: SAMHSA/CSAT, 2009 (TIP 49)

Taking the medication each day communicates to the individual that he or she will have this unpleasant, uncomfortable reaction if alcohol or alcohol-based products are consumed. Armed with this knowledge, the person can work to refrain from drinking. However, people realize they can avoid the reaction they do not want simply by stopping the medication. Thus, high levels of motivation to abstain are necessary for disulfiram to be effective. In general, older men with worse drinking histories but more socially stable and participating in Alcoholics Anonymous (AA) are more likely to adhere to the regimens of the medication and achieve enhanced outcomes ((Douaihy et al., 2013).

### ***Acamprosate.***

Approved in 2004 by the FDA for AUDs, acamprosate (Brand name = Campral®) is a relapse-prevention medication that affects various neurotransmitters, structurally resembles GABA and glutamate (Douaihy et al., 2013), and has a good safety profile (Acamprosate, 2012). Usually initiated after individuals stop drinking, it can be safely used with alcohol or with benzodiazepines. It can also be started during medically supervised withdrawal. It reaches full effectiveness in five to eight days and should be maintained if a client relapses to alcohol use. In general, there is no specific client profile that must be considered if planning to use acamprosate in the treatment of AUDs. Not surprising though, it is most effective for clients that are motivated toward complete abstinence rather than decreased drinking when treatment begins. Acamprosate may also be utilized concurrently by clients undergoing opioid maintenance therapy. The fact that there are no known clinically significant drug interactions associated with acamprosate appears to give it a safety valve for clients that are trying to deal with multiple medical issues and are currently taking many other medications (SAMHSA/CSAT, 2009).

Efficacy for acamprosate has been mixed. In the COMBINE Trial, the largest multisite study of treatment for alcohol dependence to date in this country, the medication showed no greater benefit than placebo for clients dependent on alcohol. It should be noted that the U.S. trials contained limited numbers of individuals and they should have undergone detoxification prior to treatment. Acamprosate has been studied much more extensively in Europe where results have been positive. European studies demonstrated acamprosate's effectiveness over placebo in significantly increasing the proportion of clients who were already abstinent to remain continuously abstinent (Douaihy et al., 2013).

**Trade name:** Campral®.

**How taken:** Two tablets by mouth three times daily, with or without food (With some clients, a lower dose may be effective. This lower dose *must* be used with those that have impaired renal function.)

**How supplied:** 333 mg delayed-release, enteric-coated tablets.

Source: SAMHSA/CSAT, 2009 (TIP 49)

**Contraindications**

<i>Condition or Circumstance</i>	<i>Treatment Recommendation</i>
Clients who are hypersensitive to acamprosate or its components	Do not prescribe acamprosate.
Clients with severe renal impairment (creatinine clearance ≤ 30 mL/min)	Do not prescribe acamprosate.

Source: SAMHSA/CSAT, 2009 (TIP 49)

Benefits associated with treatment of alcohol dependence with acamprosate include limited side effects, no negative liver effects, and no drug interaction profiles. Yet dosing three times a day may negatively impact client adherence. Clinicians might help their clients improve adherence by assisting them in identifying reminders that will work for them, e.g., having them wear “reminder” bracelets, setting alarms on watches/clocks/cell phones, or purchasing three-a-day pill containers (SAMHSA/CSAT, 2009).

***Naltrexone.***

Naltrexone is an opioid antagonist that was first developed as treatment for opioid addiction. It was not until the mid-1990’s that the FDA approved the drug for treatment of AUDs. Naltrexone oral might be referenced as Revia® or Depade® (SAMHSA/CSAT, 2009). Oral naltrexone has demonstrated reductions in intensity and frequency of drinking, reductions in risk of relapse to heavy drinking, and increases in the percentage of days that individuals remain abstinent. Most published controlled studies compared the medication to placebo (Douaihy et al., 2013).

***Oral Naltrexone.***

Oral naltrexone is an antagonist that blocks the effect of other narcotics and alcohol. First developed in the treatment of opioid addiction, naltrexone was FDA approved for treatment of AUDs in the mid-1990’s (SAMHSA/CSAT, 2009). It works to help reduce alcohol cravings and to lessen alcohol’s positive effects. Naltrexone showed effectiveness when used in conjunction with other treatments such as counseling, group therapy, Alcoholics Anonymous (AA) meetings, family therapy, and residential or hospital treatment. However, adherence to daily doses is problematic (The Addiction Recovery Guide, 2014).

### Evidence-Based Treatments

Oral naltrexone's FDA approval includes a black-box warning for hepatotoxicity, especially when given in excessive doses. It is contraindicated in liver failure or acute hepatitis and use in clients that have active liver disease must be carefully considered. The effects are reversible and have shown to be primarily associated with much higher doses than typically used in routine clinical practice (e.g., at least 300 mg/day). Research further suggests that the negative effects tend to show up only after clients have been on these higher doses for extended periods of time (SAMHSA/CSAT, 2009).

As with other medications used to assist in substance use treatment, it is recommended that signs and symptoms of acute alcohol withdrawal have subsided in advance of treatment initiation. At least three days of abstinence are typically recommended, with seven days preferred. However, it is safe to initiate treatment involving oral naltrexone during medically supervised withdrawal or if the individual is actively drinking. Abstinence lessens withdrawal side effects (SAMHSA/CSAT, 2009).

Clients who are motivated to participate in treatment or those who will allow medication monitoring have been deemed as good candidates for oral naltrexone. It has further been shown that persons with intense alcohol cravings make good candidates for oral naltrexone treatment. Persons being considered for treatment of AUDs with oral naltrexone should be educated about the effects of using opioids and/or other drugs while taking the prescribed medication (SAMHSA, 2015).

The pill form is typically prescribed as a single daily dose. In general, prescriptions run for 12 weeks when individuals who are abstinent to reduce the craving for alcohol early on during treatment, when the risk of relapse is greatest (about.com, 2014). In fact, the label says that oral naltrexone should be taken for a period up to three months for the treatment of AUDs. However, it is recommended that treatment involving oral naltrexone be individualized. Thus, some individuals may be treated for three months while other persons might be treated for as long as 12 months (SAMHSA/CSAT, 2009).

**Trade name:** ReVia®; Depade®

**How taken:** Tablet by mouth once daily.

**How supplied:** 50 mg tablets.

Source: SAMHSA/CSAT, 2009 (TIP 49)

### Contraindications

<i>Condition or Circumstance</i>	<i>Treatment Recommendation</i>
Clients with moderate to severe renal impairment	Carefully monitor (naltrexone is eliminated through the kidneys)
Clients with active liver disease	Monitor liver function frequently
Clients with serum aminotransferase levels > 5 times the upper limit of normal	Generally avoid, unless potential benefits outweigh risks
Pregnant and nursing women and women of childbearing age	Do not prescribe during pregnancy and nursing unless potential benefits outweigh risks*. Caution that effects on fetus are unknown. Encourage use of effective birth control method

### Evidence-Based Treatments

Clients with chronic pain or acute or recurring need for opioid analgesics	Have clients abstain from naltrexone for at least 3 days (conservatively 7 days) before initiating opioid analgesics
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\*Oral naltrexone is FDA pregnancy category C. Adequate, well-controlled human studies are lacking, and animal studies have shown a risk to the fetus or are lacking as well. There is a chance of fetal harm if the drug is administered during pregnancy; but the potential benefits may outweigh the potential risk. It is unknown whether oral naltrexone is excreted in human milk.

Source: SAMHSA/CSAT, 2009 (TIP 49)

Treatment outcomes are better if naltrexone is not begun until symptoms and signs of acute alcohol withdrawal have subsided. At least three days of abstinence are recommended, with seven days preferable. Clients experience fewer medication side effects if they are abstinent from alcohol when they begin treatment with naltrexone. It is safe to begin with naltrexone even if clients do not practice abstinence prior to treatment (SAMHSA/CSAT, 2009).

Research results involving oral naltrexone have not been as positive for clients with more severe alcohol dependence or in long-term treatment in outpatient settings. Not surprisingly, lack of adherence to the medication regimen played a substantial role in the less-than-favorable findings (Douaihy et al., 2013).

### Extended-Release Injectable Form (Vivitrol).

Vivitrol was approved back in 2006 by the FDA for treatment of alcohol addiction (Rubin, 2010). The extended-release form of naltrexone can be taken as a once-a-month depot injection given in a physician's office (CMCS, 2014). It is administered by intramuscular (IM) gluteal injection (SAMHSA/CSAT, 2009). This slow release form of naltrexone has shown efficacy in reducing heavy drinking outcomes because of its increased medication adherence. Studies have further shown its effectiveness in reducing rates of alcohol dependence in the general population. In these studies, the depot form of naltrexone was prescribed and monitored in primary care settings (Douaihy et al., 2013).

**Trade name:** Vivitrol®

**How taken:** 380 mg intramuscular injection once every 4 weeks.

**How supplied:** Single-use cartons, containing the following: one 380 mg vial of Vivitrol microspheres, one vial containing 4 mL (to deliver 3.4 mL) diluent for the suspension of Vivitrol, one 5 mL prepackaged syringe, one 20-gauge ½-inch needle, and two 20-gauge 1.5-inch needles.

Source: SAMHSA/CSAT, 2009 (TIP 49)

### **Contraindications**

<i>Condition or Circumstance</i>	<i>Treatment Recommendation</i>
History of sensitivity to polylactide glycolide (PLG) polymer, carboxymethylcellulose, or any components of the diluent	Do not administer injectable naltrexone
Anticipated need for opioid analgesics	Do not administer injectable naltrexone

within the next 30 days	
Patient obesity	Do not administer injectable naltrexone if patient's body mass precludes IM injection with the provided 1.5-inch needle. Inadvertent subcutaneous injection may cause a severe injection-site reaction.

Source: SAMHSA/CSAT, 2009 (TIP 49)

In clinical trials, individuals receiving the 380 mg IM injection of naltrexone (in addition to psychosocial support) demonstrated a 25 percent decrease in heavy drinking days compared to persons receiving placebo. Significant decreases were also found for individuals receiving a lower dose of injectable naltrexone (190 mg). Their decreases were 17 percent compared to persons receiving placebo (SAMHSA/CSAT, 2009).

### Other Promising MATs for AUDs.

Promising results have been shown for *Gabapentin* in treating alcohol dependence (Howland, 2013). Currently approved in the treatment of nerve pain and seizures, persons reporting alcohol dependence who participated in a study from 2004-2010 were better able to stay sober. Further, gabapentin did not produce serious side effects (The Addiction Recovery Guide, 2014). Gabapentin (specifically the 1800-mg dosage) was effective in treating alcohol dependence as well as relapse-related symptoms of dysphoria, insomnia, and craving, with a favorable safety profile (Mason, Quello, Goodell, Shadan, Kyle, & Begovic, 2014).

Another anticonvulsant, *oxcarbazepine* (Trileptal), may also be useful in the treatment of alcohol dependence by reducing alcohol craving. It treats alcohol withdrawal symptoms through an anticonvulsant effect. However, it was not helpful in preventing DTs or seizures (DeSimone, Tilleman, & Powell, 2014). Several studies have suggested its efficacy in improving abstinence and reducing alcohol consumption. However, additional research is needed to confirm the efficacy of oxcarbazepine in the treatment of alcohol dependence (Wilkins, n.d.).

*Ondansetron*, marketed as Zofran in the treatment of vomiting and nausea associated with chemotherapy, has been observed to increase abstinence, decrease alcohol consumption, and stop cravings in people who are early-onset alcoholics. Compared to a placebo group, the persons with early-onset alcoholism treated with ondansetron had fewer drinks per day and they experienced an increase in the number of abstinent days per week (The Addiction Recovery Guide, 2014).

The anticonvulsant, mood-stabilizing medication *Topiramate* (Topomax) has been tested in the reduction of alcohol cravings. It was found to be more effective than a placebo, significantly decreasing obsessive thoughts and compulsions about alcohol use, increasing wellbeing for those treated, and improving some aspects of quality of life. Thus, Topiramate lessened the risk of relapse (The Addiction Recovery Guide, 2014).

Caution is advised with regard to the use of Topiramate in the treatment of pregnant women that use/misuse alcohol. The FDA says that new data indicates an increased risk of cleft palate and/or cleft lip in the exposed fetus (The Addiction Recovery Guide, 2014).



A study found that the muscle relaxant **Baclofen**, marketed as Lioresal or Gablofen, reduced alcohol cravings. In addition, there was evidence that the medication has effectiveness in reducing alcohol consumption as well as inducing abstinence. Though the study was small, the evidence supports Baclofen as a potentially useful medication in the treatment of alcohol dependence.

**Chantix** (varenicline), approved in the treatment of smoking cessation, has been studied as a potential option in the treatment of alcohol dependence. A 2013 study showed individuals treated with Chantix demonstrated significantly lower number of drinks per day, number of drinks per drinking day, weekly percent of heavy drinking days, and alcohol craving compared to a placebo group. It should be noted that Chantix has been linked to a number of serious psychiatric problems including agitation, depression, and suicidal behavior. Other health and safety risks have also been cited, such as seizures, heart attacks, diabetes, falls, and accidents (The Addiction Recovery Guide, 2014).

## Opioids and MAT

Opioids are pain-relieving substances. They reduce the intensity of pain signals reaching the brain, affecting those brain areas by controlling emotion to diminish the effects of the painful stimulus (NIDA, 2011). Opioids slow down the actions of the body, such as heartbeat and breathing, and also affect the brain to increase pleasant feelings (SAMHSA, 2014). Medications falling with this class of substances include: oxycodone (e.g., Percocet, OxyContin), hydrocodone (e.g., Vicodin), morphine (e.g., Avinza, Kadian), and codeine. Hydrocodone products tend to be the most frequently prescribed for painful conditions such as injury-related and dental pain. Codeine is most often prescribed for mild pain. Morphine, on the other hand, is used before and after surgical procedures to alleviate more severe pain (NIDA, 2011). Heroin, once believed to be a wonder drug and replacement for morphine, continues to be a drug of choice for individuals who run short on money for the purchase of prescription opiates. Heroin is less expensive as well as illegal (Narconon International, n.d.).

Opioid dependence is a chronic disorder, often relapsing, that also contributes to major medical challenges such as human immunodeficiency virus (HIV)-related illnesses, hepatitis, and other chronic diseases. It is frequently linked to a history of drug-related criminal activity and persons dependent on opioids often have co-occurring mood disorders, especially depression. Antisocial personality disorder is also more prevalent in persons with opioid dependence than in the general population (Krambeer, McKnelly Jr., Gabrielli Jr., & Penick, 2001).

With wider acknowledgement that opioid dependence should be treated as a chronic disease, medications have been approved by the FDA as effective in treatment (Rinaldo & Rinaldo, 2013). Approved medications include buprenorphine (Suboxone®, Bunavail, Subutex®, and Zubsolv®), methadone, and naltrexone (ReVia®, Vivitrol®, Depade®) (SAMHSA-HRSA/CIHS, 2014). Every recipient of medication-assisted treatment for opioid dependence should also receive psychosocial treatment. Supportive medication monitoring, individual and/or group counseling, and attendance at 12-step/mutual help groups should be part of the assisted-treatment package (Sullivan, 2014). Special weight must be given when considering opioid substitution therapy for pregnant women or adolescents (Chalk et al., 2013). Treatment details for these two populations are provided in their respective sections in this document. On the whole, it has been suggested that MAT is more suitable for users of opioids that meet one or more of the following criteria:

- Poor social support
- Unstable housing and/or lifestyle
- Limited financial resources
- No insurance or less than adequate insurance
- Structure of a dispensing situation that must be attended regularly (Chalk et al., 2013; SAMHSA, 2015).

First steps in the medical management of opioid addiction include 1) use of validated screening tools to identify patients who may have a problem with opioid use and 2) further assessment to clearly delineate the scope of the problem when opioid addiction is identified. Consideration must be given to the appropriate treatment approach when treatment is indicated. Assessment should also identify complicating or comorbid emotional or medical conditions. Complete assessment may take several days but it is not recommended that initial treatment be delayed (SAMHSA, 2004).

Thorough assessment will assist in confirmation of the diagnosis. It is designed to determine need for treatment, develop a treatment plan, and establish a baseline measure for evaluating progress. The assessment should encompass all of the following:

- Confirmation of an opioid use disorder diagnosis;
- Establishment of current opioid use;
- Documentation of substance use history;
- Identification of any need to require medically supervised detoxification from opioids as well as benzodiazepines, alcohol, or other sedatives;
- Determination of where and when such detoxification should be accomplished;
- Identification of comorbid psychiatric and medical conditions and disorders and prioritization and coordination of their management;
- Screening for infectious diseases that place opioid users at elevated risk such as Hepatitis C, Hepatitis B, and human immunodeficiency virus/acquired immune deficiency syndrome (HIV/AIDS) (SAMHSA, 2015).

The American Society of Addiction Medicine (ASAM) announced the release of its National Practice Guideline for the Use of Medications in the Treatment of Addiction involving Opioid Use in early June 2015. A PDF version containing full text is available for download at <http://www.asam.org/docs/default-source/practice-support/guidelines-and-consensus-docs/national-practice-guideline.pdf?search=%22national%20practice%20guideline%20for%20the%20use%20of%20medic%22>. The document can also be found in the *Journal of Addiction Medicine*. The Guideline deals with a number of in MAT topics around opioid use such as the role of drug testing in treatment,

proper duration of buprenorphine treatment, and the growing role of naloxone in reversing opioid overdose. It is intended to help clinicians in managing their clients and clinical decision-making. The Guideline reminds clinicians about informing clients of benefits, risks and alternatives to particular treatments and ensuring their active participation in shared decision making whenever possible (ASAM, 2015).

## Pharmacological Treatments.

Pharmacologic medications used to treat opioid addiction consist of three types: agonists, partial agonists, and antagonists. **Agonists** turn on receptors more slowly and hence have a longer lasting action that helps in the prevention of withdrawal. The effects of **partial agonists** are weaker than those of the full agonists. **Antagonists**, on the other hand, block actions of the receptors. Thus, this blocking action serves to slow or diminish relapse if there is a return to formerly used/misused substances (ONDCP, 2012).

Agonist therapies have proven to be the most effective pharmacological treatments for opioid use disorders (OUDs). Methadone and buprenorphine are the most commonly used agonist therapies. They work by occupying the sites stimulated by opioids and turning on the receptors. Thus, these medications have similar actions to those of the used/misused substance but have different pharmacokinetic profiles.

Additionally, agonist treatments are usually provided in combination with psychosocial and/or other support services (Douaihy et al., 2013; Thomas et al., 2014).

A large number of studies comparing methadone and buprenorphine have shown that 8 mg of sublingual buprenorphine or 16 mg of the tablet form of buprenorphine per day is equivalent to approximately 60 mg of oral methadone per day (SAMHSA/CSAT, 2005).

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Use/Misuse of opioids, particularly heroin, is further associated with the transmission of sexually transmitted infections (STIs), hepatitis, human immunodeficiency virus (HIV), and other blood-borne diseases that can result from use of unsterile drug paraphernalia and risky behaviors.

Treatment involving MAT then not only helps individuals move away from the vicious cycle of addiction, but can assist in the prevention of related adverse health consequences (NIDA, 2012).

The antagonist naltrexone blocks opioids from acting on the brain and takes away the reward of getting high on the problem opioid. This feature makes naltrexone a good choice for preventing relapse. The medication may be helpful when persons using opioids are completely past withdrawal and highly motivated to stay in recovery. Naltrexone may also be recommended for individuals in an early stage of opioid addiction (SAMHSA, 2012b).

## ***Methodone.***

MMT is one of the most widely used and effective pharmacological methods for treating addictions, especially addiction to opioids. Research on the treatment began for male addicts in 1964 at the Rockefeller Hospital. Women were not admitted into treatment research until 1967 (Kreek, Borg, Ducat, & Ray, 2010).

Methodone is a long-acting, potent opiate agonist used to treat individuals dependent on opioids. It imitates the action of an opiate like heroin by occupying and activating opioid receptors in the body. Its effects last from 24 to 30 hours. Methodone does not generate the extreme euphoria of short-acting, injectables such as heroin because of its slow, very long period of metabolism. Its potency is greater than most other opioids so it produces a physiological tolerance. As a result, individuals should not abruptly stop taking the drug. Neither does methodone provide protection from the use/misuse of non-opioid drugs such as marijuana, cocaine, benzodiazepines, or alcohol (Chalk et al., 2013).

Methodone for opioid addiction can only be administered by opioid treatment programs (OTPs) that are certified by the Substance Abuse and Mental Health Services Administration (SAMHSA) and licensed by the Drug Enforcement Agency (DEA) (Chalk et al, 2013). Persons on methodone maintenance therapy (MMT) are typically required to visit an OTP daily to obtain their dose of

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**Methodone for opioid addiction can only be administered by appropriately licensed and certified opioid treatment programs (Chalk et al., 2013).**

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medication under direct clinical observation. A significant history of stabilization should be established for persons on MMT to receive take-home doses (Chalk et al., 2013).

If an individual is deemed eligible for admission to a MMT program, the following should be completed by program staff members:

- Comprehensive physical evaluation prior to admission
- Laboratory workup as indicated
- Psychosocial assessment
- Preliminary treatment plan
- Client orientation during the initial stage of treatment (SAMHSA, 2015).

Usual dispensation of methodone involves daily doses at a methodone treatment facility. It is possible for persons to become eligible for take-home doses based on lack of known criminal activity, absence of behavioral problems at the clinic or recent substance use/misuse, appropriate clinic attendance, and evidence of a stable home life with the ability to safely store the methodone (Fullerton et al., 2014).

### *Evidence-Based Treatments*

Methadone treatment predicts lower risk of infection from the human immunodeficiency virus (HIV), a blood-borne infection that is sometimes linked to intravenous drug use. Research has shown that, while in methadone-maintenance treatment (MMT), individuals use significantly less than they did before they started treatment. Persons in MMT also use less frequently than individuals not in treatment (Chalk, et al., 2013; Lawrinson et al., 2008). Methadone treatment has been recognized as an effective tool in increasing adherence to antiretroviral therapy in people with HIV/ acquired immune deficiency syndrome (AIDS) (World Health Organization [WHO], 2011). The methadone dosage may need to be adjusted when treating persons with HIV because some of the medications developed to treat the infection can accelerate or retard the body's transformation of methadone. In all instances, it is important to develop a full listing of medications being taken by the individual to treat HIV. Another primary concern of methadone treatment is the high relapse rate associated with withdrawal from use, even following long periods of maintenance (Chalk et al., 2013).

In regard to dosing, it is recommended to start low and go slow (i.e., use the safety principle) for early medication dosages in outpatient settings (SAMHSA, 2005). The ASAM Guideline recommends initial dosing of 10 to 30 mg, with reassessment in three to four hours. The second dose should not exceed 10 mg on the first day if withdrawal symptoms are continuing (ASAM, 2015). According to a consensus panel, programs should monitor and adjust patient dosages to ensure they receive therapeutic amounts of medication without regard to arbitrary dose-level ceilings that are not supported by research evidence. (The panel's recommendation applies across all opioid treatment medications.) Decisions regarding dosages should be appropriate and tailored to each patient. Dosages lower than those recommended by the manufacturer may be sufficient for the desired therapeutic effect in many cases, especially when patients have a positive diagnosis for cardiac risk factors (SAMHSA, 2005).

In the first week of treatment, dosage adjustments should be based on how patients feel at the peak period for their medication (e.g., 2-4 hours following a methadone dose has been administered), not on how long the effects of the medication last. About 60 mg has been accepted widely as the low end of effective for most patients. However, other patients may require much more for optimal effect, even higher than 120 mg per day. There is some evidence that patients receiving more than 200 mg of methadone per day can have optimal results with no adverse effects. Nevertheless, treatment providers should be more cautious when providing higher doses, especially as take home, because of possible increased diversion potential. Research has indicated patients with hepatitis C or mental disorders comorbid with their opioid use disorder may need increases of 50 percent or more in methadone dosage to achieve stabilization. Lower doses have been shown to be less effective in facilitating abstinence in patients addicted to heroin (SAMHA/CSAT, 2005).

Recent research on MMT continues to support its effectiveness. For example, the literature continues to show that methadone is more effective than no medication treatment in the reduction of illegal opioid use and retention in treatment. Even when compared with treatments offering no opioid replacement therapy, such as drug-free rehabilitation protocols or detoxification protocols, methadone was significantly more effective in suppression of heroin use (as measurement by urine drug testing) and treatment retention. Similar findings have been demonstrated for individuals receiving interim methadone treatment, which is treatment under daily supervision while the person is awaiting placement in a standard methadone program, compared to just being on a wait list. There has also been some support that MMT reduces substance-related risk factors such as the sharing of injection paraphernalia (Fullerton et al., 2014).

### *Evidence-Based Treatments*

In general, research has shown that higher doses of methadone, i.e., greater than 60 mg, are associated with less heroin use during treatment, fewer withdrawal symptoms, better treatment retention and enhanced abstinence from cocaine (Fullerton et al., 2014; Thomas et al., 2014). MMT has its drawbacks too. The medication can be fatal in overdose and increase risk of severe liver disease if clients continue to use other substances such as alcohol, benzodiazepines, and barbiturates while on MMT. In addition, there is the potential for diversion to illicit trafficking, though there are very strict Federal and state regulatory requirements for OTPs and their clients (Douaihy et al., 2013).

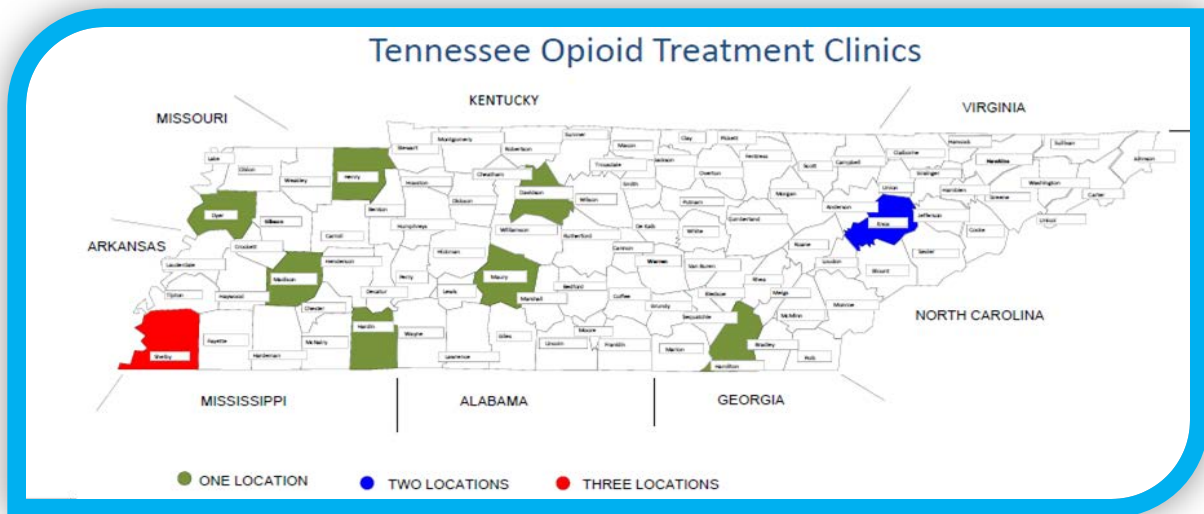
Switching from methadone to another medication in the treatment of opioid use is not recommended unless the client is experiencing intolerable side effects or there is a lack of success in attaining or maintaining treatment goals. It is further recommended that clients switching to buprenorphine from methadone be on low methadone doses at the time of the switch, i.e., 30-40 mg per day or less. Otherwise the client may experience significant discomfort from the medication switch. Switching to oral naltrexone or the extended-release injectable from methadone requires that the client be completely withdrawn from methadone and/or other opioids (ASAM, 2015).

Compared to buprenorphine maintenance, MMT appears to be more effective in retaining people in treatment, particularly if the buprenorphine is prescribed in a flexible dose regimen or at a fixed and low dose (2 - 6 mg per day) (Mattick, Breen, Kimber, & Davoli, 2014). However, some studies have found MMT to be no more effective than nonmedical approaches such as NA over time. Results of one study showed that the MMT group did not differ from the NA group on key outcome variables, i.e., alcohol, barbiturate, and cocaine use or on retention rate. In addition, a substantial proportion in each group failed to return to their illicit substance use during treatment. The prevalence of benzodiazepine misuse and cigarette smoking, however, was lower in the MMT group than for the NA group. Nevertheless, results from this study support abstinence therapies rather than MAT in producing positive outcomes over the long term for persons with opioid use disorders (Khodabandeh et al., 2012).

### *Tennessee's Methadone Maintenance Treatment (MMT) Programs.*

Effective April 1, 2008, TDMHSAS assumed oversight of the state's Opioid Treatment Programs (OTPs). These programs may also be referenced as "medication-assisted treatment" (MAT) programs. More specifically, OTPs were established to provide methadone maintenance therapy (MMT). The department's State Opioid Treatment Authority (SOTA) is responsible for providing medical, pharmaceutical, and administrative oversight to certified OTPs, including, but not limited to, development, education, planning, and implementation of policies and procedures to ensure that opioid addiction treatment is provided at an optimal level (TDMHSAS/SOTA, 2012). There have been only 12 OTPs in the state since April 17, 2014 (TDMHSAS/SOTA, n.d.). (See location map below.)





Source: Tennessee OTP Locations since April 17, 2014.

Persons seeking treatment at an OTP shall be evaluated by the medical director or program physician and clinical staff with appropriate qualifications. The evaluation is designed to determine whether opioid substitution or detoxification would be the most appropriate mode of treatment for the service recipient. Moreover, treatment must be documented as medically necessary. In the event the OTP has a waiting list and health of an expectant mother and/or her unborn baby is more at risk than the health of others waiting for services, pregnant women with substance dependency shall be given priority for admission and services (TDMHSAS, 2012).

Initial assessment must be completed within seven days of admission. It addresses a person's eligibility and need for treatment while also providing indicators for initial dosage level. Included in the initial assessment are:

- Physical examination.
- Relevant health history, specifically acute or chronic medical conditions.
- Personal and family mental health and medical history.
- Identification of currently prescribed medications.
- Personal and family history of substance use/misuse.
- Evaluation of other substances of use/misuse.
- Determination of other opioid dependence.
- Determination of duration of addiction.



- Full toxicology screen.
- Tuberculosis screen.
- 
- Screening test for syphilis.
- Other tests as appropriate, including HIV testing and EKG, e.g. (TDMHSAS, 2012).

### ***Buprenorphine.***

FDA approval of buprenorphine provided another evidence-based MAT option for people with opioid dependence and research findings are primarily favorable (Douaihy et al., 2013). Buprenorphine can be administered at OTPs like methadone but was approved to have administration provided by physicians in office-based settings (Chalk et al., 2013). As required by Federal law, physicians that prescribe buprenorphine must have special certification, meeting designated qualifying requirements, and additionally notify the Secretary of Health and Human Services of their intent to prescribe buprenorphine in the treatment of addiction to opiates. Once certified, the physicians must affix the unique identification number on every buprenorphine prescription they write. The physicians further receive a waiver from the Drug Enforcement Administration (DEA) to provide treatment for opioid dependence in their office for not more than 100 persons at a time (SAMHSA, n.d.). In 2016, the number of patients that can be treated with buprenorphine by certified physicians was increased to 275 in the third year. A waiver to that effect must have been requested and the physicians must have additional credentialing in addiction medicine or addiction psychiatry from a specialty medical board and/or professional society, or practice in a qualified setting as described in the rule (ATForum, 2016). The final rule will be effective as of August 8, 2016 (ASAM staff, 2016).

Buprenorphine is a long-acting (up to 48 hours), high-affinity, partial mu opioid agonist. Thus, it acts as a functional antagonist blocking the effects of pure mu agonists. Because it is a partial agonist, buprenorphine is safer in overdose. Its ceiling effect results in less respiratory depression. (Methadone, on the other hand, is a pure mu agonist.) Moreover, buprenorphine's euphoric effect is considered more diminished than methadone's, thereby making it less likely to be diverted (Douaihy et al., 2013). A partial opioid agonist, buprenorphine is available in both film and tablet formulations (Federation of State Medical Boards, 2013). Two forms were approved by the FDA in the treatment of opiate addiction in 2002, Subutex (buprenorphine hydrochloride) and Suboxone (buprenorphine combined with naloxone) (FDA, 2002; Partnership at Drugfree.org, 2002). These medications became the first medications approved under the Drug Abuse Treatment Act (DATA) of 2000 and for office-based treatment of opioid dependence in this country (Thomas et al., 2014). The "mono" product, buprenorphine alone (Subutex), might also be called "bup" or "buprenorphine mono-formulation (ONDCP, 2012) and has high abuse/diversion potential. As a consequence, the "mono" product should not be prescribed for unsupervised administration unless there are extenuating circumstances. The combination product, buprenorphine/naloxone (Suboxone), has minimal abuse potential. "Mono" and combination buprenorphine products can be administered sublingually (CMCS, 2014; FDA, 2002). Induction should start with a dose of two to four mg, with increases as needed in increments of two to four mg (ASAM, 2015). **The typical**

**maintenance dose for Suboxone ranges from 12 mg to 16 mg. Doses higher than 16 mg may be useful on rare occasions but a thorough re-evaluation of the client's treatment needs would be required** (Douaihy et al., 2013). Dosing based on reported substance use can be very helpful in targeting eventual final doses of buprenorphine (DVHA/VDH/ADAP, 2012). The table below presents suggested dosing targets;

**Table 1. Suggested Guide for Dose Targets**

<b><u>Buprenorphine</u></b> <b><u>Doses</u></b>	<b><u>Oxycodone</u></b>	<b><u>Morphine</u></b>	<b><u>Heroin</u></b>	<b><u>Methadone</u></b>
2 mg	30 mg	60 mg	<u>1-2 bags</u>	10 mg
4 mg	60 mg	120 mg	<u>3 bags</u>	20 mg
6 mg	90 mg	180 mg	<u>4 bags</u>	30 mg
8 mg	120 mg	240 mg	<u>6 bags</u>	40 mg
12 mg	180 mg	360 mg	<u>8 bags</u>	60 mg
16 mg	240 mg	480 mg	<u>10 bags</u>	80 mg

*Source:* DVHA/VDH/ADAP, 2012

As a partial agonist that is less potent than methadone, buprenorphine is further deemed as much safer when taken in the manner prescribed. Moreover, there are fewer side effects with buprenorphine compared to methadone (Chalk et al., 2013; The Partnership for Drugfree.org, 2002).

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Generic forms of buprenorphine were approved by the FDA in 2013 (Chalk et al., 2013). If administered too soon after use of an opioid

agonist, buprenorphine can exacerbate withdrawal symptoms. Administration should not occur until at least 12 hours following use of any short-acting opioids and 36 hours following use of methadone (Chalk et al., 2013). Due to the greater vulnerability of the tablet form to diversion and nonmedical use than the sublingual film, the patent-holding company submitted a request to the FDA to eliminate tablet formulations from the market (Federation of State Medical Boards, 2013).

On February 25, 2013, the first two generic versions of Suboxone (Bup/Nx) were approved by the FDA. Initially prices for the brand name and generics were not substantially different. However, prices were expected to drop as more competitors entered the market. The generic version of the sublingual tablets was marketed as Zubsolv. The generic film was marketed as Bunavail (NAABT, 2015). **Probuphine® was recently approved by the FDA on May 26, 2016.** Additional study was required because there were particular concerns about insertion and removal of the implant. As designed, the implant is the "first and only commercialized maintenance treatment for opioid dependence in individuals who have sustained clinical stability on low-to-moderate doses of buprenorphine, i.e., eight mg or less a day. The implants can only be provided by specially trained, certified healthcare providers. Probuphine® has been available to patients since June 2016. A six-month course of treatment will cost \$4,950. However, the company says a payment assistance program will be put in place to ensure access to Probuphine® for patients (Braeburn Pharmaceuticals, 2016). Buprenorphine, currently available in sublingual tablet and oral formulations, had annual sales in 2012 in the U.S of about \$1.5 billion (Poland, 2015). Production ceased for the brand name buprenorphine tablet formulation in March 2013 due to safety concerns related to possible pediatric ingestion of the tablets (Chalk et al., 2013).

Physicians that prescribe buprenorphine must complete special training in order to qualify for the Drug Enforcement Administration (DEA) prescribing waiver (Chalk, 2012; TBME, 2012). As of May 11, 2016, there were 400 physicians listed as certified to prescribe buprenorphine in the State. Physicians decide whether or not they want to be listed in the locator so the number is likely an underestimate. (See the Buprenorphine Physician & Treatment Program Locator at [http://buprenorphine.samhsa.gov/bwns\\_locator/](http://buprenorphine.samhsa.gov/bwns_locator/)). Buprenorphine treatment programs are authorized under 21 United States Code (U.S.C.) Section 823 (g)(1) to dispense medications. The code gives no authorization to the programs for prescribing. Further, programs registered under 21 U.S.C. Section 823 (g)(1) are not subject to client limits (SAMHSA, n.d.).

A Federal rule change, effective January 7, 2013, modified the dispensing requirements of buprenorphine products for opioid dependence as used in Federally certified and registered opioid treatment programs (OTPs). The rule provides more flexibility in dispensing take-home products by removing restrictions on the time an individual needs to be in treatment in order to receive take-home supplies. OTPs will continue to adhere to all other Federal treatment standards established for methadone (Federal Register, 2012). Nevertheless, OTPs are still required to assess and document each patient's responsibility and stability to handle opioid drug products for unsupervised use. In addition, buprenorphine products may be prescribed to OTP patients by an OTP physician that has a DATA 2000 waiver as long as the physician adheres to his or her patient limits (SAMHSA, 2015).

Buprenorphine doses studied for opioid addiction treatment range from a low of 1–2 mg to as much as 16–32 mg, depending upon the formulation (solution versus tablet), with treatment duration lasting from a few weeks to years (SAMHSA/CSAT, 2004). Research shows that buprenorphine clients in outpatient settings stay in treatment longer (Chalk et al., 2013). When buprenorphine is prescribed at fixed doses (i.e., greater than seven mg per day), treatment retention or suppression of illicit opioid use was not different from methadone prescribed at fixed doses (i.e., 40 mg or more per day) (Mattick, Breen, Kimber, & Davoli, 2014). Moreover, buprenorphine clients experience more rapid resolution of withdrawal symptoms to persons treated through MMT (Chalk et al., 2013). Nevertheless, there is no difference in treatment completion or severity of withdrawal for persons treated with buprenorphine compared to MMT (Chalk et al., 2013). As an additional note, buprenorphine treatment, like methadone, has been recognized as an effective tool in increasing adherence to antiretroviral therapy in people with HIV/AIDS (World Health Organization [WHO], 2011).

Ideally, buprenorphine should be discontinued when an individual has achieved the maximum benefit from treatment and no longer requires continued treatment to maintain a substance-free lifestyle. However, discontinuation should be tapered rather than instituted abruptly. Abrupt discontinuation will result in withdrawal symptoms (SAMHSA/CSAT, 2004). Furthermore, individuals should be well-stabilized before honoring client requests to withdraw from the buprenorphine medication (DVHA/VDH/ADAP, 2012; Ling et al., 2009).

Ling et al. (2009) studied long and short tapers after buprenorphine stabilization on participant outcomes, as measured by opioid free urine tests at the end of each taper period. A long taper comprised 28 days while a short taper consisted of seven days. Data were collected at the end of weekly visits for services, and at one- and three-month follow-ups. Findings provided evidence that clients stabilized on a range of buprenorphine doses can be tapered successfully over seven days. This study indicates a lack of advantage in prolonging the buprenorphine tapering schedule for

weeks (DVHA/VDH/ADAP, 2012; Ling et al., 2009). Table 2 below displays a suggested buprenorphine taper regimen for a seven-day period of time.

**Table 2. Suggested Buprenorphine 7-Day Taper Regimen**

Stabilization Dose*		8 mg	16 mg	24 mg
Day				
1		8	16	24
2		6	12	20
3		6	10	17
4		4	8	12
5		4	4	8
6		2	2	4
7		2	2	2
8		0	0	0

Source: DVHA/VDH/ADAP, 2012

A study by Nielsen, Hillhouse, Thomas, Hasson, & Ling (2013) compared outcomes for users of prescription opioids (PO) versus users of heroin under taper conditions of seven or 28 days, with one- and three-month follow-ups, after buprenorphine stabilization. Results were consistent with the Ling et al. (2009) study. There appears to be no benefit in prolonging the taper period beyond seven days for either group of substance users. The greatest distinction between the groups seemed to be the dosages they were stabilized on. Users of PO tended to be stabilized on buprenorphine dosages not higher than 16 mg, whereas users of heroin tended to require 24 mg for stabilization.

If a patient on methadone wants to switch to buprenorphine, the methadone dose should be tapered to not more than 30 mg per day for a minimum of one week before initiating the buprenorphine induction treatment. The first dose of buprenorphine should be 2 mg of the monotherapy formulation and should not be received until at least 24 hours after the last methadone dose (SAMHSA/CSAT, 2004). No time delay is recommended when switching from buprenorphine to methadone. This switch involves the addition of a full mu opioid agonist to a partial agonist which typically does not result in adverse reactions. When switching to naltrexone from buprenorphine, a period of seven to 14 days should elapse between the last dose of buprenorphine and the start of naltrexone. This delay helps to ensure that the client is not physically dependent on opioids prior to starting naltrexone (ASAM, 2015).

Best practice says office-based treatment of opioid dependence requires prescribing of only FDA-approved medications. This means only buprenorphine/naloxone sublingual (s.l.) film, buprenorphine s.l. tablets, or monoproduct s.l. tablet. No other substances or buprenorphine formulations have been approved for this use. It is further not advisable to administer large prescriptions of buprenorphine/naloxone early in treatment. For example, it is not recommended to give more than a week at a time in the first months until the recipient has stabilized and stopped opioid and/or other substance use. Additionally, the recipient should have demonstrated regular treatment attendance and a check of the controlled substance database should confirm no other prescribers and no evidence of other controlled substance prescriptions (Sullivan, 2014).

Several researchers have further examined buprenorphine treatment outcomes across users of different types of opioids. Moore et al. (2007), e.g., compared outcomes among 200 clients who

reported exclusive use of heroin, use of heroin and prescription opioids, or strictly use of prescription opioids. Demographically, prescription-opioid-only users tended to be younger, have less years of opioid use, and less drug treatment history than heroin-only users. They were also likely to be white, less likely to have Hepatitis C, and have higher incomes. Compared to the heroin-only users, prescription-opioid-only users remained in treatment longer, had a higher percentage of opioid-negative urine samples, and were more likely to complete treatment than heroin-only users. Combination opioid users (heroin and prescription) demonstrated outcomes intermediate between the prescription-opioid-only and heroin-only users (Moore et al., 2007).

Buprenorphine has been shown to work well with pregnant women. Thomas et al. (2014) reviewed 16 adequately designed randomized controlled trials of buprenorphine maintenance treatment (BMT), in addition to seven meta-analyses. These researchers noted improved outcomes for individuals and pregnant women with opioid use disorders compared with placebo (Thomas et al., 2014). Breastfeeding can be considered in pregnant women treated with buprenorphine, depending on individual risk factors (Soyka, 2013).

Research comparing buprenorphine maintenance to tapering for treatment retention is also underway. Results of a randomized clinical trial carried out in primary care settings between February 2009 and February 2013 showed better treatment retention and reduced illegal use of opioids for maintenance versus the taper group. A larger proportion of opioid-positive urine samples were also provided by the taper group also provided (Fiellin et al., 2014). More positive results for buprenorphine tended to occur when there were comparisons to a placebo. Methadone appeared to be better suited over buprenorphine for clients with very severe addiction (Douaihy, 2013).

Effective July 1, 2015, Tennessee physicians were limited to prescribing buprenorphine solely for opioid use. They will no longer be able to prescribe the medication for pain management. The “mono” formulation of the medication, Subutex, was also limited to treatment of opioid dependence for pregnant and nursing women or individuals who have an adverse reaction to naloxone. A Good Samaritan provision establishing protections for individuals seeking emergency medical assistance in the event of a drug overdose from certain criminal drug charges was included in this law, known as the Addiction Treatment Act of 2015 (Kim, 2015).

### **Naltrexone.**

Naltrexone was first developed as treatment for addiction to opioids in 1984. It works by displacing any opioids from a user’s opioid receptors and then tightly binding to those receptors for an extended period of time, which makes the receptors unavailable for activation by any self-administered opioid such as heroin (Chalk et al., 2013). To begin naltrexone treatments, however, individuals must have instituted a period of abstinence from opioid use. If a patient has failed to abstain from all opioid use (legal and/or illicit) for a period between seven and 10 days, , administration of naltrexone will produce immediate opioid withdrawal (Chalk et al., 2013; SAMHSA, 2012a). Naltrexone can be taken as a once-a-month injection given in a physician’s office or orally in tablets (CMCS, 2014). When taken at a stable dose following detoxification, individuals will no longer experience euphoric effects from use of opioids such as heroin or prescription drugs (Chalk et al., 2013). Naltrexone does not imitate the effects of opioids (ONDCP, 2012). People are less likely to drop out of treatment with naltrexone when there are powerful external motivators, such as the likelihood of losing an important job, upon which adherence is contingent. Having



family members involved in monitoring adherence is also very helpful. The medication seems to be particularly useful for highly motivated individuals that have appropriately detoxed and desire a faster detoxification schedule or need additional support to avoid relapse (Chalk et al., 2013).

Any switching to methadone or buprenorphine should be planned, considered, and monitored. The switching process should not be complicated but a time delay is required. It is recommended that clients on oral naltrexone wait a single day prior to switching and those receiving the extended-release formulation not to switch for 30 days (ASAM, 2015).

Drug interactions have been reported when naltrexone is used in conjunction with other medications. For example, the side effects of somnolence and lethargy have been reported when naltrexone is used with some antipsychotic medications such as thioridazine or chlorpromazine. Naltrexone has not been approved by the FDA for treatment of opioid dependency in persons younger than 18 years of age (Chalk et al., 2013).

Caution should further be taken regarding use of naltrexone with pregnant women, breast-feeding women, or women who become pregnant while on naltrexone therapy. Naltrexone is classified as a B3 risk in pregnancy which means that its effects on the fetus are not known. Either animal studies have not shown a clear risk or no adequate, well-controlled studies have been conducted involving pregnant women. Caution is also recommended when the person using opioids is a polydrug user or has depression or other major psychiatric illness (Chalk et al., 2013).

### *Oral Naltrexone.*

Oral naltrexone, approved by the United States Food and Drug Administration (FDA) in the treatment of opioid addiction in 1984, binds to opioid receptors in the body for 24-30 hours (Chalk et al., 2013). A seven to 10-day abstinence period is required prior to beginning naltrexone therapy, to avert withdrawal, relapse, or early dropout. After detoxification (i.e., withdrawal management) has been accomplished or established, stable doses of naltrexone can be administered. Neither withdrawal symptoms nor abuse potential is associated with naltrexone use. The medication has no narcotic effect. Tolerance has been tested and results showed negative even after many months of regular use. Naltrexone is sold under one of the following trade names: Depade®, Trexan®, and Revia® (Chalk et al., 2013; Tetrault & Fiellin, 2012).

While effective, use of this form of naltrexone is plagued by the fact that many clients fail to adhere to the treatment regimen. Research has shown that 50 to 70 percent of persons prescribed oral naltrexone discontinues use (Chalk et al., 2013).

Because Naltrexone blocks the effects of opioids, it is sometimes prescribed for 12 months for those trying to manage drug dependence (about.com, 2014). Its administration is not linked to the development of dependence or tolerance (Drugs.com, 2005). Supplied in 25, 50, and 100 mg tablets (SAMHSA/CSAT, 2005), research indicates that 50 mg of Naltrexone will block the pharmacologic effects of 25 mg of intravenously administered heroin for up to 24 hours. Additional data have suggested that doubling the Naltrexone dose provides blockade for 48 hours and that tripling the dose provides blockade for about 72 hours. A flexible approach to a dosing regimen has been suggested in an effort to enhance adherence. For example, patients may receive 50 mg every weekday and a 100 mg dose on Saturday or they may receive 100 mg every other day, or 150 mg every third day. Several studies have employed the following dosing regimen: 100 mg on Monday,

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100 mg on Wednesday, and 150 mg on Friday. This dosing schedule has been shown to be acceptable to many patients striving to maintain their opioid-free state successfully (Drugs.com, 2014). This dosage regimen is recommended in the ASAM Guideline as well (ASAM, 2015).

There have been many trials of oral naltrexone in the treatment of opioid dependence and results show elimination of opioid use among those who adhere to the medication. However, adherence to or outright discontinuation of oral naltrexone is a big problem. Research shows 50-70 percent of persons that have been prescribed oral naltrexone for opioid dependence either discontinue using it or fail to take it as prescribed. Adherence is extremely important because the blocking action of oral naltrexone lasts no longer than 24-36 hours, on average. Thus, a missed dose may result in relapse, which would require new detoxification and naltrexone induction. It is believed that the seven to 10-day abstinence-from-opioid-use requirement prior to beginning naltrexone induction contributes

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Successful candidates for oral naltrexone have included medical professionals, other persons with their employment in jeopardy, and people in the criminal justice system (Kjome & Moeller, 2011).

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to the poor adherence and early drop out (Chalk et al., 2013). Nevertheless, oral naltrexone has shown to be particularly useful when motivation to abstain is high. It works very well for patients who are closely monitored and have much to lose from being exposed

as having relapsed to opiate use (Minozzi et al., 2011). Successful candidates have included medical professionals, other persons with their employment in jeopardy, and people in the criminal justice system, (Kjome & Moeller, 2011). The medication is reported to be of greatest use for persons who take the drug as part of a comprehensive occupational rehabilitative program, behavioral contract, or other compliance-enhancing protocol. While Naltrexone will not reinforce medication adherence, it is expected to have a therapeutic effect when given under external conditions that support continued use of the medication (Drugs.com, 2014).

### *Extended-Release Injectable Form (Vivitrol).*

Unlike the oral naltrexone, buprenorphine, and methadone, the extended-release injectable form of naltrexone (Vivitrol) allows people addicted to opioids to take the effective medication once a month versus every day. It was approved in October 2010 by the FDA for treating individuals dependent on opioids. Research supports its effectiveness, producing equally significant reductions in the use of opioids throughout a full month's injection period. In addition, research shows that between 35 to 50 percent of Vivitrol users voluntarily return for their continued monthly injections (Chalk et al., 2013). Vivitrol has shown to be more effective when provided in conjunction with behavioral therapies and social supports (SAMHSA, 2012a).

In addition to having a different frequency of administration, extended-release injectable naltrexone (Vivitrol) has a different route of administration, different restrictions on prescribing/dispensing, different abuse and diversion potential, and no additional requirements, compared to methadone and buprenorphine. This form of naltrexone binds to opioid receptors for up to 30 days (Chalk et al., 2013).

Vivitrol is administered monthly instead of daily like buprenorphine and methadone. Moreover, the drug is injected intramuscularly by an appropriate health care professional, i.e., any person who is licensed to prescribe medicine (SAMHSA, 2012a). It is recommended that injections be



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administered in alternating buttocks over the course of treatment. Missed doses should be administered as soon as possible (Krupitsky, 2012). Unlike buprenorphine and methadone, Vivitrol is not an opioid and does not have abuse potential (SAMHSA, 2012a). It is a long-acting form of naltrexone that blocks opioids (Rubin, 2010).

Because Naltrexone displaces the opioids of abuse by binding to those receptors, complete detoxification from opioids is required in advance of initiating or resuming treatment with the extended-release injectable.

Otherwise, the individual will likely go through intense withdrawal. A minimum of seven to 10 days without opioid use is recommended prior to beginning extended-release injectable naltrexone (Vivitrol) (Krupitsky, 2012; SAMHSA, 2012a).

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Because Naltrexone displaces the opioids of abuse by binding to those receptors, complete detoxification from opioids is required in advance of initiating or resuming treatment with the extended-release injectable (Krupitsky, 2012, e.g.).

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The standard dosage is 380 mg and is not affected by age, weight, or other factors (ASAM, 2015; SAMHSA, 2012a). This means that a 60 year old and a 30 year old would receive the same dosage, e.g. The FDA has not yet approved the use of Vivitrol for persons younger than the age of 18 (SAMHSA, 2012a). It may be possible that clients taking the oral form of naltrexone want to switch to the injection. The writer did not locate any systematically collected data that specifically addressed this issue or whether precautions should be taken (Vivitrol.com, 2013).

A study using claims data from a large health plan in this country examined benefits of extended-release naltrexone in comparison to other medications for opioid dependence. The analysis focused on six-month medication persistence, health care utilization, opioid-related and nonrelated inpatient admissions, detoxification and rehabilitation, outpatient services, and total costs. Total healthcare costs for extended-release naltrexone were not significantly different from buprenorphine or oral naltrexone and were 49 percent lower than for methadone, despite the higher pharmacy costs for this medication. Further, patients treated with extended-release naltrexone further had fewer opioid-related and nonopioid-related hospitalizations, compared to patients receiving any of the FDA-approved oral medications for opioid dependence (Baser, Chalk, Fiellin, & Gastfriend, 2011).

People in the following categories have been deemed good candidates for the extended release injectable form of naltrexone.

- Failed in their methadone or buprenorphine treatment.
- Reported or demonstrated a high level of motivation to achieve and maintain abstinence from opioids.
- Presented with brief and/or less severe history of dependence on opioids.
- Currently facing periods of intense relapse risk into opioid dependence including greatly increased stress.

- Indicated a preference to receive treatment for opioid dependence in an office-based, primary care setting rather than in treatment centers or specialty clinics.
- Expressed desire to reduce the amount of time spent going to daily visits at an OTP (SAMHSA, 2012a).

### *Precautions.*

Physicians should educate clients who are being treated with medications containing naltrexone. In particular, physicians should provide information about mortality risks that exist during and upon discharge from treatment for opioid dependence. Behavioral health professionals and other social supports, such as family and friends, have an important role in reminding individuals in treatment of these risks as well. In general, persons treated with extended-release injectable naltrexone should:

- Wear medical alert jewelry or carry some form of identification so emergency personnel can provide safe and appropriate care involving pain management when the client is unconscious or cannot otherwise communicate (SAMHSA, 2012a).
- *NOT* take naltrexone if they are female and are breast feeding or pregnant (SAMHSA, 2012b).
- Take necessary precautions with naltrexone in the home. Keep it locked in a safe place at all times to prevent its accidental use by others, especially children (SAMHSA, 2012b).
- *NOT* use other opioid medications when taking naltrexone. Naltrexone blocks the effects of opioids, thus preventing those medications from working (SAMHSA, 2012b).
- *NOT* use alcohol, illicit drugs, or drugs that slow breathing while taking naltrexone. The combination of naltrexone and other substances, especially when taken in large amounts, can result in death or overdose (SAMHSA, 2012b).

There are 18 states that require documentation of the use of injectable naltrexone and 20 states plus the District of Columbia that require documentation of behavioral therapy with buprenorphine-naloxone use. It is recommended that care be taken in ensuring that such requirements are not unduly burdensome and consequently limit appropriate access to pharmacotherapy as an effective treatment for opioid use and other substance use disorders (CMCS, 2014).

## **Barriers to Medication-Assisted Treatment (MAT)**

The continued negative health outcomes stemming from alcohol and nicotine use, in addition to the dramatic increase in heroin and other opioid-related overdoses point to the need for greater access to substance use treatment medications. Moreover, MAT for SUDs has proven to be cost effective,

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clinically effective, and to significantly reduce use of detoxification and in-client services. Yet medication-assisted treatment (MAT) is underutilized and access remains limited. A 2011 study found fewer than 30 percent of contemporary substance use treatment programs offer medications and less than 50 percent of eligible clients in the programs actually receive medications (SAMHSA-HRSA/CIHS, 2014). Among the factors identified as contributors to the low use of MAT options include:

- Agency regulatory policy that forbids or restricts the use of MAT;
- “Fail first” criteria that requires trial of other therapies first;
- Lack of available prescribers;
- Lack of support for existing prescribers;
- Limits on prescribed dosages;
- Minimal coverage for counseling; and
- Workforce misunderstandings and attitudes about the nature and use of medications in substance use treatment (SAMHSA-HRSA/CIHS, 2014).

Financing and reimbursement barriers at the state level have also been identified. A small three state, six-site pilot project facilitated development of several solutions and policy opportunities (SAMHSA-HRSA/CIHS, 2014).

Research has shown limited adoption of MAT by SUD treatment organizations, particularly in programs that rely heavily on governmental sources of funding. This finding suggests that clients in publicly funded substance-use treatment settings are less likely to have access to evidence-based programs (EBPs) relative to those receiving care from privately financed systems (Knudsen, Abraham, & Oser, 2011).

## **Conclusion**

Abstinence from substance use disorders (SUDs) can be very challenging and MATs can help. MATs are proven evidence-based practices in the treatment of substance use disorders (SUDs) that assist in weaning people off their substances of use/misuse and make the withdrawal process more tolerable. These medications tend to suppress the user’s desire to use while, in most cases, still providing a euphoric effect. Similar to most medications, MATs have a long list of potential side effects and present dangers if they are not properly used. Further, they can become a crutch for the user; several of the medications have abuse potential. Equally important, MATs treat only part of the problem. They do not address the traumatic or emotional issues that may have led to the substance use/misuse in the first place. MATs are supposed to be accompanied by counseling and recommendations for attendance at mutual help groups such as NA. Unfortunately, many patients fail to adhere to the counseling/self-help component of MAT (Camp, 2015).

The highest levels of use of medication-assisted treatments have been reported by privately funded treatment programs. As expected, the lowest levels of adoption of MAT protocols were demonstrated in publicly funded programs (Roman et al., 2011).

## Psychosocial Treatments

Evidence-based (EB) psychological treatments exist for treating some substance use disorders (SUDs). Treatments are defined as EB based on criteria outlined by Chambless et al. (1998) according to criteria requiring treatments to be efficacious in randomized controlled trials (RCTs) or their logical equivalents. Only studies based on RCTs or their logical equivalents afforded strong causal inferences. Criteria to support the research of identified treatments are shown below:

Status	Criteria
Strong	Support from two well-designed studies conducted by independent investigators
Modest	Support from one well-designed study or several adequately designed studies
Controversial	Conflicting results, or claims regarding mechanisms are unsupported

Source: APA/Div12, 2016.

EB treatments have been found to be effective for dependence on the following substances:

### For Use of Mixed Substances

**Motivational Interviewing** (strong research support) – Motivational Interviewing (MI) is a brief person-centered clinical method for strengthening clients’ motivation for and commitment to change. It is particularly indicated for clients who are ambivalent, reluctant, or defensive about change. Strongly rooted in the work of Carl Rogers, the overall spirit of MI is collaborative and empathic. It typically involves one to four sessions. Rather than working from a deficit model in which the therapist provides what the client is missing (e.g., skills, insight, knowledge), MI seeks to evoke the client’s own strengths, motivations, and resources. In MI, particular attention is paid to specific aspects of client speech that predict subsequent change. The therapist elicits and explores the client’s own reasons for change within an atmosphere of acceptance to minimize resistance and defensiveness.

MI therapists use diverse strategies to evoke and strengthen clients’ “change talk.” There are specific guidelines for deciding what questions to ask, and what content to reflect and summarize. Studies have demonstrated that therapists adhering to MI-consistent skills are able to significantly increase client change talk, which in turn predicts behavior change outcomes. Therapists learning MI typically begin by developing a strong foundation of client-centered counseling skills (reflective listening, open questions, affirmation, summaries), and then learn to identify, evoke, and strengthen client change talk using these skills strategically (APA/Div12, 2016).

**Motivational Enhancement Therapy (MET)** (strong research support) – Motivational Enhancement Therapy (MET) employs motivational interviewing along with assessment and personalized feedback. It has been observed to be particularly helpful for less-ready clients, where the initial task is to develop ambivalence about change. It is designed to help the individuals resolve ambivalence regarding his or her use of substances. Identification and alteration of thoughts and behaviors that promote the substance use is the focus of cognitive-behavioral coping skills therapy. The person is educated about the model, collaborating with the therapist to identify and use different thoughts and behaviors and using role-plays and behavioral rehearsals. Homework opportunities are typically provided through this model as well. The community reinforcement approach is a comprehensive cognitive-behavioral approach that focuses on aspects of the person’s environment that either supports or hinders his or her substance use. Many techniques are incorporated including teaching new coping skills, involving significant others, and conducting a functional analysis of the substance use. These techniques are designed to assist the individual in creating a reinforcing sober lifestyle (APA/Div12, 2016; Borsari et al., 2011).

**MET plus Cognitive Behavior Therapy** (strong research support) – Motivational Enhancement Therapy (MET)/Cognitive-Behavioral Therapy (CBT). Initial sessions employ MET in an effort to elicit intrinsic motivation to change substance use/misuse by resolving the person’s ambivalence. The CBT component follows, focusing on helping the individual to become abstinent (Chambers et al., 2013). Based on the notion that thoughts cause behaviors and determine the way in which people perceive, interpret, and assign meaning to their environment, the CBT component encourages individuals to examine the pros and cons of their use/use and to create goals that will help them achieve a healthier lifestyle (APA/Div12, 2016; Winters, Botzet, & Fahnhors, 2011).

**Prize-Based Contingency Management** (strong research support) – The Contingency Management (CM) component is a structured behavioral therapy that involves frequently monitoring the behavior targeted for change, then reinforcing the behavior each time it occurs using tangible, escalating reinforcers. Drug use behavior is typically the behavior targeted for change, but other behaviors such as treatment attendance can also be reinforced. Individuals are reinforced for submitting drug negative urine samples or attending treatment by earning the chance to win prizes ranging from \$1 to \$100 in value—hence, the prize-based component. Chances to win prizes increase with sustained abstinence or attendance.

Generally CM treatments are in effect for 8-24 weeks and provided as an adjunct to other treatment. It can be integrated with virtually any form of therapy, including CBT, community reinforcement approach therapy, eclectic/standard group treatment, 12-step therapy, motivational enhancement therapy, to name a few. For reinforcement of abstinence, the best outcomes of CM are typically achieved if abstinence from a single drug is reinforced, if onsite urine testing monitoring is conducted at least twice weekly, and if reinforcement magnitude is high. The purpose of the prize CM system is to enhance patient outcomes while minimizing reinforcement and administrative costs (APA/Div12, 2016).

**Seeking Safety** (strong research support for adults, modest research support for adolescents) – A present-focused, coping skills therapy to help people attain safety from trauma/PTSD and SUD, Seeking Safety (SS) embodies compassionate tone that honors what clients have survived and respects their strengths. It is a first-stage model that can be used at the start of treatment. There are five key principles of SS are: 1) Safety is the overarching goal; 2) Integrated treatment; 3) Focus on ideals (counteracts the loss of ideals in both substance use and trauma); 4) Four content areas: behavioral, cognitive, interpersonal, and case management; and 5) Attention to clinician processes.

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There are 25 treatment topics, each with a clinician guide and client handouts. Designed to be flexible in use, the topics can be conducted in any order and number and pacing/length of sessions can be determined by the clinician. Among the topics are Safety, Asking for Help, Healthy Relationships, Red and Green Flags, Setting Boundaries in Relationships, and Taking Good Care of Yourself.

SS can be used with a broad range of vulnerable populations, including those who are severe and chronic, adolescents, military personnel/veterans, criminal justice, homeless, domestic violence, racially/ethnically diverse, mild traumatic brain injury or other cognitive impairment, serious and persistent mental illness, low-reading or illiterate clients, and others. It can further be conducted by a broad range of clinicians. SS was designed for flexible use and can be implemented at low cost (APA/Div12, 2016).

***Friends Care*** (modest research support) – Friends Care (FC) is a six-month aftercare program that should be implemented in stand-alone community facilities. Persons exiting SU treatment programs are contacted up to one month prior to planned discharge to orient them to FC, introduce them to aftercare staff with whom they will be working, and jointly develop preliminary aftercare plans. Services are offered by counselors under the direction of a supervisory case manager, with emphasis placed upon building community supports to drug-free living. At least some of the following services are provided at a frequency specified in the aftercare plan: a) supportive counseling with review and strengthening of risk reduction behaviors/prosocial functioning; b) case management services including skills building for obtaining needed resources; c) work with client's significant other/relevant family; d) obtaining/maintaining employment through skills building in job finding/workplace demeanor; e) affiliation with supportive community organizations/groups; f) review of HIV prevention behaviors; and g) crisis intervention. Guidance is available in the detailed implementation manual.

***Guided Self-Change*** (modest research support) – Guided Self-Change (GSC) Treatment for substance use disorders integrates motivational interviewing, relapse prevention techniques, and cognitive-behavioral to help individuals functionally analyze their alcohol or other drug problems and develop plans of their own for changing. It has been evaluated in English and Spanish, and can be delivered in individual or group formats. GSC is especially applicable for persons whose alcohol or drug problems are not severe. Materials can be downloaded and/or printed from the GSC Web site at [http://www.nova.edu/gsc/online\\_files.html](http://www.nova.edu/gsc/online_files.html). Among the available materials are therapist and client handouts, clinical tips and tools, client homework assignments, other clinical/motivational handouts and forms, and Timeline Followback (TLFB) forms (APA/Div12, 2016).

## **For Alcohol Use**

***Behavioral Couples Therapy for Alcohol Use Disorders*** (strong research support) – Behavioral Couples Therapy for Alcohol use Disorders, also known as ABCT, is an outpatient treatment for people with AUDs and their intimate partners. It is based on four assumptions—1) intimate partner behaviors/couple interactions can be triggers for drinking; 2) intimate partners can reward abstinence; 3) positive intimate relationships are keys to motivation to change drinking behavior; and 4) reducing distress in relationships lessens risk for relapse. Using CBT, the therapist works with the person who is abusing alcohol and his/her partner to: identify and reduce the partner's behaviors that cue or reinforce the drinking; strengthen the partner's support of efforts of the person's efforts to change through reinforcement of positive change and use of sobriety contracts; increase positive



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couple interactions through activities and assignments designed to increase positive feelings and improve constructive communication and problem-solving; and improve person's coping skills and relapse prevention techniques to achieve and maintain abstinence.

The treatment program consists of 2-3 hours of assessment for treatment planning, followed by 12-20 weekly therapy sessions for the person who is drinking along with his/her partner. Treatment follows cognitive-behavioral principles applied to couples therapy and specific therapeutic interventions for AUDs. A typical session follows this sequence:

- 1) Therapist asks about any drinking since the last session;
- 2) Couple presents and discusses homework assigned at the last session and use of a sobriety contract, if applicable;
- 3) Couple discusses any drinking or relational problems since the last session;
- 4) Therapist presents new material and couple engages in active learning activities in the session related to the new material;
- 5) Couple discusses upcoming high risk situations; and
- 6) Therapist assigns new homework.

Optimal implementation of ABCT occurs in the context of an existing clinic or private practice with certified/licensed behavioral health professionals who have a background in treating AUDs and knowledge of CBT (APA/Div12, 2016).

***Moderate Drinking*** (very strong research support) - Moderate Drinking (MD) involves a Web application based on principles of behavioral self-control training. It is an interactive, individualized program that guides people to set goals, self-monitor their behavior, and get detailed feedback on their progress based on their input. However, there is an element of structure. MD modules address motivation, identifying and managing triggers, developing alternatives, problem solving, dealing with lapses and relapses, considering abstinence, and self-monitoring one's mood. The program recommends first choosing a goal (abstinence or moderation), building motivation for change, "doing a 30" (a self-imposed and flexible period of abstinence that can range from 1-30 days), setting drinking goals/limits, and then self-monitoring the drinking. Individuals are asked to enter their self-monitoring data when they log back onto the site, which the program then uses to generate detailed feedback about their progress. It is recommended that people go through the modules in sequence, but its flexibility allows the choosing of which modules might best meet their needs (APA/Div12, 2016).

***Prize-Based Contingency Management*** (modest research support) – See description under "Mixed Substances" above.



## For Cocaine Use

*Prize-Based Contingency Management* (modest research support) – See description under “Mixed Substances” above.

It should be noted that other psychological treatments may also be effective in treating cocaine dependence, but they have not been evaluated with the same scientific rigor as the treatment above.

## For Tobacco Use

*Smoking Cessation with Weight Gain Prevention* (modest research support) – The Smoking Cessation with Weight Gain Prevention program is a cognitive behavioral treatment that fosters tobacco cessation along with weight management. It was designed for smokers who express some reluctance to quit because of concern about gaining weight. Treatment focuses on smoking cessation first, followed by weight control. Using this sequential form of intervention has been found to produce a rate of smoking cessation comparable to treatment for tobacco alone, but with less weight gain. Both the cessation and weight management components incorporate cognitive behavioral elements and are typically provided in a group format. The weight management component also includes meal replacements and physical activity (APA/Div12, 2016).

As for cocaine dependence, other psychological treatments may also be effective in the treatment of tobacco use. Such treatments, however, have not been evaluated with the same scientific rigor as the treatment mentioned above.

## For Co-Occurring Disorders

There are six evidence-based practices (EBPs) described in the “Integrated Dual Disorders Treatment Implementation Resource Kit”, with *integrated dual disorders treatment* (IDDT) identified as the EBP for co-existing substance use and mental illness (SAMHSA, 2013). An intensive approach, the SAMHSA-endorsed IDDT model features 26 domains. Persons receiving IDDT have a multidisciplinary team comprised of a dual diagnosis clinician and at least two of the following: physician, nurse, case manager, providers of ancillary rehabilitation services such as supportive housing, vocational, etc. A substance use specialist with a minimum of two years of experience should work collaboratively with this team as well. Any interventions (including the ancillary rehabilitation services) must be consistent with and determined by the individual’s stage of treatment/recovery. Thus, it must be determined if the individual is in the engagement, persuasion, active treatment, or maintenance/relapse prevention stage of recovery.

Treatment should be provided for as long as necessary, with intensity modified according to need and degree of recovery. Interactions must be based on MI and include expressing empathy, developing discrepancy between goals/continued use, avoiding arguments, rolling with resistance, and supporting hope/self-efficacy. If the person is in the action or relapse prevention stage of recovery, substance use counseling should focus on:

- How to manage cues to use/consequences of use;

- Relapse prevention strategies;
- Alcohol and drug refusal skills;
- Problem-solving skills training;
- Challenging beliefs about substance use; and
- Social skills training and coping skills

Persons in those stages should further be connected to community self-help groups such as AA, NA, etc. While counseling can be provided in different forms and formats, individuals should be offered group treatment specifically designed to address the co-occurring substance use and mental health problems. Significant others should be involved, to the extent possible. Efforts should also be made to enhance the person's health, e.g., encouraging him/her to practice proper diet and exercise or find safe housing (Improving MI Practices.org, n.d.).

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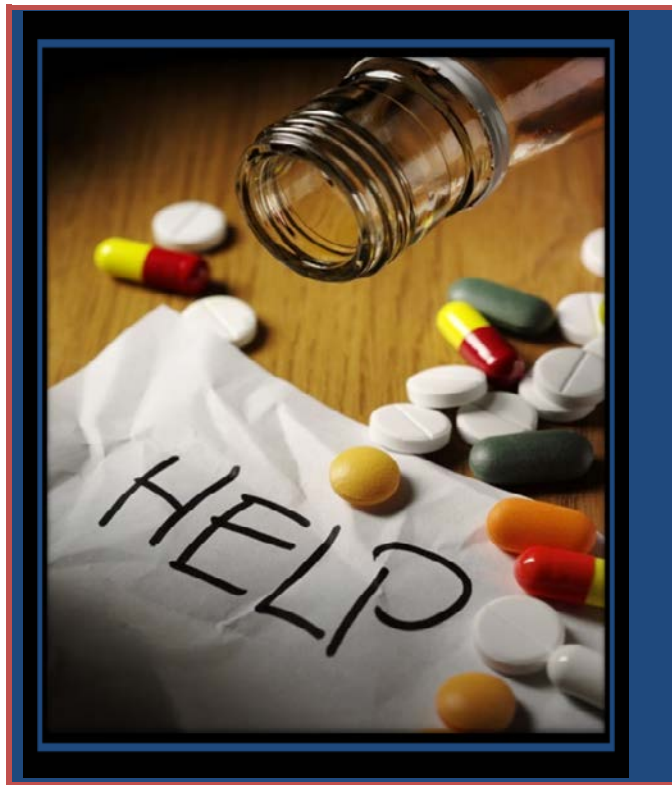
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Department of  
**Mental Health &  
Substance Abuse Services**



8/15/2016

**Substance Use Best Practice Tool  
Guide**

**TREATMENT RESOURCES**

Division of Clinical Leadership in Collaboration with the  
Division of Substance Abuse Services

# Treatment Resources

## Using ASAM Criteria

The American Society of Addiction Medicine (ASAM) criteria, formerly known as the ASAM patient placement criteria, have become the most comprehensive and widely used set of guidelines for placement, continued stay, and transfer/discharge of clients with addiction or co-occurring conditions. These criteria are the result of a collaboration to define one national set of criteria for providing outcome-oriented and results-based care in the treatment of addiction. Today the criteria are required in more than 30 states. State-funded substance use treatment providers in Tennessee are required to use ASAM (ASAM, n.d.).

State-funded substance use treatment providers in Tennessee are required to use ASAM (ASAM, n.d.).

ASAM criteria are an indispensable resource that professionals in addiction medicine rely on to provide a nomenclature for describing the continuum of addiction services. These criteria provide separate placement criteria for adults and adolescents to create individualized, comprehensive treatment plans. These plans are developed through a multidimensional patient assessment over five broad levels of treatment that are based on the degree of medical management provided, structure, safety and security provided, and intensity of treatment services provided (ASAM, n.d.).

*The ASAM Criteria*, (Third Edition), became available in 2013. Software is also available. It is recommended that the text and the software be used in tandem. The text provides background and guidance for proper use of the software. The software, then, enables comprehensive, standardized evaluation (Mee-Lee, Shulman, Fishman, Gastfriend, & Miller, 2013).

The basis of all content with the ASAM criteria is the following guiding principles:

- Clarifying ‘medical necessity’
- Clarifying the goals of treatment
- Clarifying the role of the physician
- Engaging with ‘informed consent’
- Focusing on treatment outcomes
- Identifying adolescent specific needs
- Incorporating ASAM’s definition of addiction



- Moving away from using previous ‘treatment failure’ as an admission prerequisite
- Moving from a limited number of discrete levels of care to a broad and flexible continuum of care
- Moving from fixed length of service to variable length of service
- Moving from one-dimensional to multidimensional assessment
- Moving from program-driven to clinically driven and outcomes-driven treatment
- Moving toward an interdisciplinary, team approach to care (Mee-Lee, Shulman, Fishman, Gastfriend, & Miller, 2013).

ASAM incorporates six unique dimensions that represent different life areas. The dimensions include: 1) acute intoxication and/or withdrawal potential; 2) biomedical conditions and complications; 3) emotional, behavioral, or cognitive conditions and complications; 4) readiness to change; 5) relapse, continued use, or continued problem potential; and 6) recovery/living environment. Together these dimensions impact any and all assessment, service planning, and level of care placement decisions (Mee-Lee et al., 2013).

ASAM's treatment criteria provide separate placement criteria for adolescents and adults to create comprehensive and individualized treatment plans. Adolescent and adult treatment plans are developed through a multidimensional patient assessment over five broad levels of treatment that are based on the degree of direct medical management provided, the structure, safety and security provided and the intensity of treatment services provided. Risk ratings are provided for each assessment dimension. In the ASAM Criteria, treatment is described as a continuum marked by four broad levels of service plus an early intervention level. Arabic numbers rather than Roman numerals are used to describe all levels of service, starting with this third edition. Thus, the levels of service range from Levels 0.5 (early intervention) to Level 4 (medically managed intensive inpatient services). Decimal numbers are used to further express gradations of intensity. For example, Level 3.1 is clinically managed low-intensity residential services (Mee-Lee et al., 2013).

## Tennessee Department of Mental Health and Substance Abuse Services (TDMHSAS) Treatment Services

The Division of Substance Abuse Services (DSAS) in the Tennessee Department of Mental Health and Substance Abuse Services (TDMHSAS) contracts with more than 60 community-based agencies in the delivery of treatment services across the state. The target population includes individuals that do not have means to pay for substance use treatment. Hence, state-funded treatment services are available to persons who have no financial means of obtaining services; have no other financial means of obtaining the services available through this program; are not enrolled in TennCare; do not have any other third party health-benefits payor source; have depleted their TennCare or other third party substance use treatment benefits limit; and/or meet the 133 percent Federal poverty guidelines

as set by the United States

A wide array of substance use treatment services and supports are available through DSAS.

Department of Health and Human Services (TDMHSAS, n.d.).

Priority populations consist of the following: pregnant women, women with dependent children, adolescents, and persons infected or at risk of the human immunodeficiency virus (HIV). A wide array of substance use treatment services and supports are available through DSAS.

- **Outpatient**

Involves less than nine hours of service per week for adults or less than six hours per week if the participants are adolescents. May consist of recovery or motivational enhancement therapies/strategies. In-state providers of this service are listed in the document from a link at <https://www.tn.gov/behavioral-health/article/adult-substance-abuse-treatment>.

- **Intensive Outpatient**

At least nine hours of services per week for adults or a minimum of six hours weekly for adolescents to treat multidimensional instability. Treatment service time does not exceed 19 hours weekly. Provider of this service in the state can be accessed from a link at <https://www.tn.gov/behavioral-health/article/adult-substance-abuse-treatment>.

- **Partial Hospitalization**

20 or more hours of services per week but 24-hour care is not required. In-state providers of this service are listed in the Substance Abuse Treatment Provider Directory. This document can be accessed from a link at <https://www.tn.gov/behavioral-health/article/adult-substance-abuse-treatment>.

- **Halfway House**

Provides transitional living for persons in recovery from substances. Some people go to halfway houses from other situations such as treatment centers, prisons, or a homeless situation. Other individuals go to halfway houses to be in a sober and clean environment to begin the process of recovery. Sometimes people are court ordered to live in a halfway house (halfwayhouse.com, n.d.). Oxford Houses in the state are a form of halfway house. The Substance Abuse Treatment Provider Directory can also help individuals identify providers that operate halfway houses in the state. That directory can be found in a link at <https://www.tn.gov/behavioral-health/article/adult-substance-abuse-treatment>.

- **Residential**

Participants received 24-hour care at a facility with professionally trained counselors. Services are less intense but may be the very environment that will allow the person addicted to substances to have success at quitting the use of substances. Participants get to use other residents in the program to provide a sounding board. Successful residential substance abuse programs offer a diverse experience for person recovering from his or her addiction. Treatment should be individualized. The participant and his or her counselor will recognize when the individual is prepared to exit the program. In-state providers of this service can be found through a link to the Substance Abuse Treatment Provider Directory that is located at <https://www.tn.gov/behavioral-health/article/adult-substance-abuse-treatment>.

- **Social Detox and Medically Monitored Detox**

Adults in our state can receive non-medical or social withdrawal management. This is a service that provides residential level of care for individuals in withdrawal but who do not require medical monitoring during their withdrawal. This form of withdrawal management is only appropriate for clients who are withdrawing from substances in which there is no likelihood of a threat to physical safety during the withdrawal process.

Medically Monitored Withdrawal Management (MMWM) services are available for eligible persons. These services are delivered by medical and nursing professionals, with the provision of a 24-hour medically supervised evaluation and withdrawal management in a facility with inpatient/residential beds. At this time, there are seven providers of this service at nine different locations across the state. A list of providers can be obtained from [https://www.tn.gov/assets/entities/behavioral-health/attachments/MMWM\\_Treatment\\_Providers\\_List.pdf](https://www.tn.gov/assets/entities/behavioral-health/attachments/MMWM_Treatment_Providers_List.pdf).

Medically managed inpatient withdrawal management is available on a limited basis for those who need to be in a hospital during withdrawal from substance use. It is delivered by medical and nursing professionals and provides 24-hour, medically-directed observation, evaluation, monitoring, and withdrawal management in an acute care inpatient setting. Such services are currently available through the Pathways agency located in Jackson, TN.

## Withdrawal Management (Detoxification) Considerations

Withdrawal management (detoxification) becomes the first priority in treatment planning when an individual's substance use disorder (SUD) has progressed to the point that there is physical dependence. The onset of a physical withdrawal syndrome, despite being uncomfortable and in some cases extremely dangerous, provides an unparalleled opportunity to engage the individual in interventions that may lead to sustained recovery (Mee-Lee et al., 2013).

Nevertheless, when an individual stops taking the problem substance, the body will react to the "withdrawal" of the drug (SAMHSA/CSAT, 2011). It is possible to withdraw from use of some substances "cold turkey". However, stopping substance use in this manner can carry very significant risks, especially if the drug being discontinued is alcohol, a benzodiazepine, or an opiate. Quitting "cold turkey" is also not advisable if an individual has been using the substance for a long time or in large amounts (Hartney, 2014). Hence, withdrawal management is typically recommended and offered.

Distinct from substance use treatment, detoxification or detox allows for withdrawal from the problem substance with support, usually medical. It is primarily designed to handle the physical symptoms that can accompany withdrawal from substances (The Addiction Recovery Guide, 2014).

The American Society of Addiction Medicine now refers to detoxification services as "withdrawal management". The

body—more specifically, the various organs affected by substance use and/or abuse—detoxifies.

Clinicians assist with management of the withdrawal (Mee-Lee et al., 2013).

The process of withdrawal management not only treats the acute physiological symptoms that appear when individuals stop using the substance but removes residual toxins in the body that have built up over time due to chronic use/misuse (The Addiction Recovery Guide, 2014).

The process of withdrawal management not only

treats the acute physiological symptoms that appear when individuals stop using the substance but removes residual toxins in the body that have built up over time due to chronic use/misuse. It can be carried out in an inpatient or an outpatient setting. Outpatient withdrawal management is less disruptive for the individual and costs less, but gives him or her greater opportunity to be around the substance(s) of misuse/use (The Addiction Recovery Guide, 2014).

Prior to medication treatment for addiction, withdrawal management routinely occurred at the beginning of treatment. This focus still holds for programs in which complete substance abstinence is the goal and in the treatment of addictions that have no approved medications (ONDCP, 2012).

There is a continuum of five levels of withdrawal management (detoxification services) for adults in the ASAM Criteria: Levels 1-WM, 2-WM, 3.2-WM, 3.7-WM, and 4-WM. Commonly only the most intensive and expensive levels of withdrawal management are funded and delivered (Level 3.7-WM and Level 4-WM)

## Withdrawal Management of Alcohol.

Not all substances will pose a physical threat to people's safety during withdrawal. However, a medically monitored detoxification approach, at minimum, is recommended for individuals that decrease or discontinue alcohol use abruptly following regular consumption. Alcohol withdrawal can result in potentially dangerous side effects such as seizures and sometimes can be fatal (Addiction.com, 2012).

Signs of alcohol withdrawal can occur as soon as two hours after the last drink, though the typical withdrawal symptoms don't tend to appear until five to ten hours following the last drink. Included among the common alcohol withdrawal symptoms are:

- Anxiety
- Elevated blood pressure
- Elevated heart rate
- Insomnia or sleep difficulties
- Irritability
- Nausea
- Nightmares or unusual dreams
- Over excitedness
- Rapid breathing
- Sweating
- Tremors or uncontrollable shaking
- Vomiting (Addiction.com, 2012).

These symptoms typically peak in severity one to two days after the last drink. Most of the common symptoms subside within three to four days, but a large percentage of alcoholics continue to crave alcohol for years following treatment (O'Brien, 2012). The most common serious side effects associated with alcohol withdrawal include:

- Seizures that could occur consecutively over the course of several hours
- Vivid, detailed hallucinations that can last up to two days

- Delirium tremens (DTs) which can cause extremely serious complications without adequate treatment. (It is the less common of the three side effects, but the most dangerous. Onset will usually start within 48 to 72 hours of the last drink consumed. They peak in severity around four or five days after the last drink. It may be necessary to hospitalize individuals who experience DTs so they can be closely and safely monitored for cardiac or respiratory complications. Death happens in five to 15 percent of persons experiencing DTs even when proper medical care is provided (Addiction.com, 2012).

Inpatient medical withdrawal management services are appropriate for alcoholics with co-occurring medical conditions or those at risk for serious complications of withdrawal. These services are highly recommended if the individual has a past history of alcohol withdrawal seizures or delirium tremens (DTs), e.g. As inpatients, these individuals are given medications to help them through their withdrawal. Benzodiazepines are typically used to reduce the risk of adverse events. Clonidine and carbamazepine have also been used during the withdrawal process (The Addiction Recovery Guide, 2014).

Sometimes it may not be necessary to treat the person through inpatient services. In fact, recent research has shown outpatient detoxification as effective as inpatient treatment and less costly for individuals with less severe alcoholism. However, this method requires daily follow-up and monitoring. Often a tranquilizer is used for the first 24 hours (The Addiction Recovery Guide, 2014).

## **Withdrawal Management of Cocaine.**

There is no known pharmacologic therapy for cocaine addiction. However, several substances have been used in the withdrawal management of cocaine. Antidepressants may be used to reduce the anxiety and/or depression associated with non-use. Benzodiazepines and tranquilizers have been used to reverse the anxiety often associated with cocaine withdrawal. It is possible that amantadine, a drug used in the treatment of Parkinson's, may be effective for persons exhibiting severe cocaine withdrawal symptoms. Cravings have also diminished with this medication. Bromocriptine decreases cravings during detoxification and mood disturbance. The beta-blocker Propranolol may be useful for severe cocaine withdrawal symptoms. However, its use is not risk free for persons who have taken cocaine. The drug can be linked to decreased blood flow to the heart, as well as other changes that may predispose individuals to arrhythmia, and a severe elevation of blood pressure that can lead to stroke. Delayed toxic effects are also possible. Careful monitoring and caution are required if Propranolol administered (The Addiction Recovery Guide, 2014).

## **Withdrawal Management of Opioids.**

Withdrawal from opioids can be intensely uncomfortable but is not life threatening. The chronicity and severity of the symptoms, though, raise the probability of relapse if withdrawal is not handled properly (Mee-Lee et al., 2013).

### ***Rapid Detox.***

Individuals undergoing rapid detoxification are put to sleep with general anesthesia. Opiate blockers are given intravenously to stop the action of narcotics and opiate drugs. Injections of other medications such as muscle relaxants maybe given to further reduce the symptoms of withdrawal. This method results in physical detoxification within four to eight hours. However, this form of withdrawal management should take place in the intensive care unit of a hospital. Discharge typically occurs within 48 hours after recovery from the anesthesia and assessment of the individual's physical status (The Addiction Recovery Guide, 2014).

### ***Stepped Rapid Detox.***

Individuals are given small doses of Naloxone subcutaneously as well as naltrexone orally every hour or so, along with reduced withdrawal management medications, as needed. This method allows the opiates to be removed from the body more slowly than through the intravenous route. As a result, detoxification and stabilization on Naltrexone Maintenance Therapy can occur in two to four small manageable bites (The Addiction Recovery Guide, 2014).

### ***Ultra Rapid Detox.***

This method requires that the individual undergo general anesthesia, after which he or she is given Naltrexone. The blocking mechanism of Naltrexone speeds up the withdrawal process and pushes individuals into 100 percent detoxification within five to 30 minutes. There is substantial pain involved in this method, but the anesthesia helps make it tolerable. Besides being costly, this method too has significant medical risk (The Addiction Recovery Guide, 2014).

## **Outpatient Detoxification.**

Ambulatory detoxification is an outpatient model that is considered appropriate only when a positive and helpful social support network is available to the participant. Outpatient detoxification services should be designed to treat the individual's level of clinical severity, achieve comfortable and safe withdrawal substance use/misuse, and effectively facilitate the person's transition into treatment and recovery (SAMHSA/CSAT, 2006).



## Treatment Resources

### Alcoholics Resource Center.

This is an online recovery resource devoted to supporting individuals who have issues with alcohol. The site is not affiliated with Alcoholics Anonymous World Services, Inc., but was designed to provide social networking and information in support of fellow AA members. The site is available at <http://www.alcoholicsanonymous.com/aa-tennessee-tn.html>. Persons seeking help can speak with an alcohol addiction counselor by calling 1-800-895-1695.

### REDLINE Services.

Call 1-800-889-9789 for  
**REDLINE** services.

**REDLINE** is Tennessee's toll-free referral and information line to assist persons with an addiction in locating help 24 hours a day – seven days a week. The service provides accurate, current alcohol, drug, and other addiction referrals and information to all residents of

Tennessee at their request. Referrals are also available for co-occurring disorders.

Persons calling **REDLINE** for help typically receive a minimum of three (3) referral sources whenever possible. **REDLINE** staff only provide information to connect the caller with a person who provides diagnosis, assessment, or prognosis of the physical or mental health of the substance abuser/user. Staff do not provide counseling or therapy services.

The **REDLINE** service is funded by TDMHSAS and coordinated by TAADAS. Referrals can be made to any program/provider that has submitted an application to be included in the **REDLINE** referral database (TAADAS, n.d.).

### Technical Assistance Publications (TAPs).

Technical Assistance Publications (TAPs) are compilations from various Federal, state, programmatic, and clinical resources that provide practical information and guidance related to the delivery of treatment services to persons with substance abuse and mental health needs. All resources may be obtained from the store of the Substance Abuse and Mental Health Services Administration (SAMHSA) at <http://store.samhsa.gov/product>. TAPs can also be obtained at the TAADAS Clearinghouse ([www.TAADAS.org](http://www.TAADAS.org)).

**TAP 19: Relapse Prevention with Chemically Dependent Criminal Offenders, Counselor's Manual**

- ✓ This TAP is intended to be used by paraprofessional counselors who work with criminal inmates and offenders that are addicted to substances. It is designed to help these counselors teach their service recipients how they can stay clean and sober. *NOTE:* This publication is provided for historical reference only. It is possible the content may be out of date (i.e., 1996 publication date).

**TAP 21: *Addiction Counseling Competencies: The Knowledge, Skills, and Attitudes of Professional Practice***

- ✓ This TAP is not a curriculum that must be followed in a specific sequence. Rather it identifies knowledge, skills, and attitudes that could serve as outcomes toward which curricula might aim. Included is a set of outcome guidelines that may be used to meet varying needs. Educators and curriculum developers can build courses, curricula, and training packages oriented toward these outcomes. Counseling practitioners can assess their own progress toward achieving the competencies. Supervisory and administrative personnel can use the materials to identify in-service training and continuing education needs within their agencies.

**TAP 26: Identifying Substance Abuse among TANF-Eligible Families**

- ✓ This TAP was designed to help substance abuse treatment providers, welfare administrators, and related agencies identify and address substance abuse in individuals eligible to receive Temporary Aid to Needy Family (TANF). Included in the document are recommendations about instruments and other identifiers, organizational culture, and outreach/marketing.

**TAP 30: *Buprenorphine: A Guide for Nurses***

- ✓ This TAP provides general information about buprenorphine products, Suboxone® and Subutex® for the pharmacological treatment of opioid addiction to nurses (including Registered Nurses, Licensed Practical Nurses, and Nurse Practitioners). It can serve as a resource to help nurses who work with community physicians to improve treatment outcomes for people receiving office-based treatment for opioid addiction.

**TAP 31: *Implementing Change in Substance Abuse Treatment Programs***

- ✓ This TAP offers expert guidance to therapists, managers, and others who work in treatment facilities with strategies for including and using evidence-based practices (EBPs) in ways that accommodate an organization's specific goals, needs, and culture. The document discusses the rewards of integrating EBPs and encourages a facility's entire staff to join in the change process so that everyone involved can be re-energized

**TAP 32: *Clinical Drug Testing in Primary Care***

- ✓ This TAP is designed for clinical practitioners who provide primary care in office settings and/or community health centers. Practitioners of focus include physicians, physician assistants, and nurse practitioners. The purpose of the document is to provide information practitioners need when deciding if drug testing will be introduced in their

practice, along with providing guidance on how to implement the drug testing. This TAP is not designed to address drug testing for legal purposes or law enforcement. Neither does it incorporate testing for the use of anabolic steroids or other performance-enhancing substances. The document does describe some ways in which drug testing can contribute to the assessment, diagnosis, and treatment of patients seen in primary care, the management of treatment for chronic pain, and the identification and treatment of substance use disorders (SUDs).

**TAP 33: *Systems-Level Implementation of Screening, Brief Intervention, and Referral to Treatment***

- ✓ This TAP describes core components of screening, brief intervention, and referral to treatment (SBIRT) programs for individuals with or at risk for substance use disorders. Also covered is the implementation of SBIRT services. TAP 33 provides general managerial and administrative information for SBIRT services, including effectiveness, implementation models, barriers and challenges to implementation, sustainability, and cost.

## **Tennessee Association for Alcohol, Drug, and Other Addiction Services (TAADAS).**

The Tennessee Association for Alcohol, Drug, and Other Addiction Services (TAADAS), more commonly referenced as TAADAS, is a statewide, service recipient-oriented association that represents thousands of individuals in recovery, as well as family members, providers, and healthcare professionals. Its mission is to educate, support and engage our members and public, influence policy and advocate for prevention, treatment and recovery services”. Additionally, TAADAS has a statewide training program that offers training on various topics related to substance abuse such as alcohol and drug use/abuse, prevention, treatment, recovery support services, co-occurring disorders, mental health and wellness, and other topics of relevance (TAADAS, n.d.).

Moreover, TAADAS has a large supply of publications that can be obtained or checked out free of charge to members or non-members who are Tennessee residents through its statewide clearinghouse. Some of the most frequently checked-out materials include:

***Tips for Teens: The Truth about...***

1. Tobacco
2. Marijuana
3. Alcohol
4. Methamphetamine
5. Cocaine
6. Club Drugs
7. Inhalants
8. Hallucinogens
9. HIV/AIDS
10. Heroin
11. Steroids

## *Treatment Resources*

- ✓ A series of brochures that provides facts and dispels myths about substance use. Information is included on long- and short-term effects, physical and psychological risks, and legal implications.

### ***Keeping Your Teens Drug-Free: A Family Guide***

- ✓ A booklet of ideas and examples of the skills busy parents/caregivers can use to keep their adolescents away from marijuana and other illegal substances.

### ***A Parent's Guide on Teenagers & Drinking***

- ✓ Young people want to be adults which makes convincing your child that alcohol is not an option an incredibly tough job.

### ***Ask. Listen. Learn. - How to Talk to Your Adolescent about Alcohol***

- ✓ A brochure designed for parents that explains why it's important to talk about alcohol as well as when and how to discuss it.

### ***A Parent's Guide to Preventing Inhalant Abuse***

- ✓ A brochure designed to educate parents about inhalant use and inhalant resources.

### ***Harmful Interactions: Mixing Alcohol with Medicines***

- ✓ A brochure covering the dangers of mixing alcohol & prescription drugs.

### ***Make a Difference: Talk to Your Child about Alcohol***

- ✓ A booklet with information to help parents discuss alcohol issues with young people ages 10-14.

### ***Beyond Hangovers***

- ✓ Most Americans recognize that drinking too much can lead to accidents and dependence. The publication gets to the rest of the story, addressing that fact that alcohol abuse can damage organs, weaken the immune system, and contribute to cancers.

### ***Violence Is Not the Answer... You Are***

- ✓ This brochure for the National Campaign against Youth Violence. Included are violence prevention techniques for adults and communities as well as a list of resources.

### ***Anabolic Steroids: Hidden Dangers***

- ✓ Steroid users are vulnerable to physical and psychological side effects, many of which are irreversible in women. The publication addresses short-term adverse physical effects of anabolic steroid abuse and points out that long-term adverse physical effects have not been studied, and as such, are not known.

### ***A Family History of Alcoholism - Are You at Risk?***

- ✓ If you are among the millions of people in this country who have a parent, grandparent, or other close relative with alcoholism, you may have wondered what your family's history of alcoholism means for you. Are problems with alcohol a part of your future? Is your risk for

becoming an alcoholic greater than for people who do not have a family history of alcoholism? If so, what can you do to lower your risk?

***Alcohol and Drug Addiction Happens in the Best of Families***

- ✓ Describes how alcohol and drug addiction affect the whole family. Explains how substance abuse treatment works, how family interventions can be a first step to recovery, and how to help children in families affected by alcohol abuse and drug abuse.

***Ask. Listen. Learn- You Are What You Drink***

- ✓ This brochure encourages young people to ask their parents and other responsible adults about the dangers of using alcohol.

***Drugs, Alcohol and HIV/AIDS: A Consumer Guide***

- ✓ Drug Abuse behavior plays the single largest role in the spread of HIV infection in the United States today. This pamphlet answers questions and offers resource and contact information.

***It's Not Your Fault***

- ✓ A brochure intended for teens with alcoholic or drug-dependent parents or caregivers. It aims to reassure them that a parent's alcohol or drug abuse isn't their fault, gives them facts about substance abuse and addiction, and provides advice and resources to help them cope.

***Drugs, Brains, and Behavior - The Science of Addiction***

- ✓ Provides scientific information about the disease of drug addiction, including the many harmful consequences of drug abuse and the basic approaches that have been developed to prevent and treat the disease

***I Quit! What to Do When You're Sick of Smoking, Chewing, or Dipping***

- ✓ For young people, this text takes an age-appropriate approach to advising youth on successful methods of tobacco cessation.

***Click It or Ticket - Booze It & Lose It***

- ✓ Covers the consequences if you make the decision to drink and drive. On the back of the card: Consequences of drinking and driving or not wearing your seat belt in Tennessee by GHSO.

***Synthetic Hallucinogenic Stimulant Marketed as "Bath Salts" - Fact Sheet***

- ✓ A fact sheet that explains about bath salts.

***Caffeine and Energy Boosting Drugs: Energy Drinks - Fact Sheet***

- ✓ A fact sheet that explains about energy drinks, what they are and the effects that they have on the body. Explains the danger of mixing energy drinks with alcohol.

***Family Guide to Systems of Care for Children with Mental Health Needs (Bilingual)***

- ✓ A bilingual family guide intended to inform caregivers and families about how to seek help for children with mental health problems. Information is provided on what caregivers and families need to know, ask, expect, and do to get the most out of their experience with systems of care.

***Underage Drinking: Myths vs Facts***

- ✓ Outlines common myths teens and pre-teens may hold about alcohol use. Corrects misconceptions with facts about the prevalence of alcohol use among youth and the effects of alcohol on the body and brain of a teen or pre-teen. Provides a resource guide.

For more information about publication checkout, call 615-780-5901 or go to <http://taadas.org> and click on the link to Free Publications.

**Tennessee Association of Mental Health Organizations (TAMHO), Addictions Committee.**

The Addictions Committee of the Tennessee Association of Mental Health Organizations (TAMHO) functions as an advocate for a comprehensive behavioral health system in the state. It collaborates with policymakers and provides learning opportunities for addictions, co-occurring, and prevention service professionals employed by TAMHO member agencies. This Committee plans and directs activities aimed at ensuring that TAMHO members are appropriately informed regarding relevant national and state policies. Moreover, the Committee presents recommendations to TAMHO's Executive Committee and Board of Directors on positions that impact the addictions service system, as well as individuals served by the system (personal communication, July 2014).

**Tennessee Co-Occurring Disorders Collaborative (TNCODC).**

The Tennessee Co-Occurring Disorders Collaborative (TNCODC) was founded in the fall of 2011. It emerged from a vision to bring about education and awareness of the impact of co-occurring disorders. This vision was identified by NAMI Tennessee and shared with the Tennessee Association of Mental Health Organizations (TAMHO) who wholeheartedly agreed. Thus, the two organizations jointly resolved to move forward with outreach and education to bring awareness to the impact of co-occurring disorders, not only on individuals but also on families and various aspects of the communities.

In 2012, the Tennessee Department of Mental Health and Substance Abuse Services (TDMHSAS) joined NAMI Tennessee and TAMHO with the provision of grant funding to aid in moving the project forward. Soon afterwards, eight more organizations jointly resolved with the mission of the Collaborative thus strengthening the voice of TNCODC.

The Tennessee Co-Occurring Disorders Collaborative is dedicated to creating a common understanding of the impact and treatment of co-occurring disorders in our communities and to share knowledge about the conditions and available resources, reduce stigma, and accurately direct people to timely and effective prevention, treatment, and support.

The TNCODC Steering Committee serves as the primary statewide structure to oversee and coordinate planning, development, and implementation of all phases of the Collaborative's activities and initiatives. The committee aims to ensure accountability, consistency, and sustainability of co-occurring disorder strategies and provide strategic and operational recommendations through the committee and subcommittee structure.

## **Treatment Finder.**

The Substance Abuse and Mental Health Services Administration (SAMHSA) provides a link to treatment services for persons in need of behavioral health services including substance abuse. The link is located at <https://findtreatment.samhsa.gov/>. Enter your address, city, or zip code into the text box on the Web page and an array of services are displayed. The service link is an online source of information for anyone seeking treatment facilities in the United States or its territories for substance or mental health problems.

## **Treatment Improvement Protocols (TIPs).**

Treatment Improvement Protocols (TIPs) are best-practice guidelines for the treatment of substance use disorders. They were developed by the Center for Substance Abuse Treatment (CSAT), a part of the Substance Abuse and Mental Health Services Administration (SAMHSA). TIPs bring together national leaders/experts in an effort to improve substance use disorder (SUD) treatment in our country. CSAT continues to draw on the experiences and knowledge of research, clinical, and administrative experts in the production of TIPs that are distributed to individuals and facilities across the country. The audience continues to expand beyond public and private treatment facilities and include practitioners in mental health, criminal justice, primary care, social services, and other health care settings.

Dissemination of a TIP is the last step in a process that begins with the recommendation of an alcohol or other drug abuse problem area for consideration by a panel of experts. Included on this panel might be clinicians, program managers, and researchers, along with professionals in related fields such as criminal justice or social services. Recommendations from this Federal panel are then communicated to members of a second group that makes more recommendations, defines protocols and arrives at agreement on protocols. Representatives on this group might include alcohol and other drug treatment programs, community health centers, counseling programs, hospitals, child welfare agencies, criminal justice, and private practitioners. A Chair approves the final document for publication. The result is a TIP that reflects the actual state of the art of alcohol and other drug abuse treatment used in private and public programs recognized for their provision of innovative and high quality alcohol and other drug abuse treatment. All resources may be obtained from the SAMHSA store at <http://store.samhsa.gov/product> or through the TAADAS Clearinghouse ([www.TAADAS.org](http://www.TAADAS.org)).



**TIP 33: *Treatment for Stimulant Use Disorders***

- ✓ This TIP delineates treatment recommendations and suggestions that are empirically supported as well as those that are currently based on consensus opinion. The purpose of TIP 33 is to advance the understanding of treating the substance use disorders associated with the abuse of methamphetamine and cocaine. Substances included in the category of "stimulants" include the derivatives of the coca plant (cocaine hydrochloride and its freebase form, "crack") and the synthetically produced amphetamines, with a primary emphasis on illegally produced methamphetamine and its smokable form, "ice".

**TIP 35: *Enhancing Motivation for Change in Substance Abuse Treatment***

- ✓ This TIP is based on the fundamental rethinking of the concept of motivation, where it is dynamic rather than static. In this TIP, motivation is redefined as intentional, purposeful, and positive, directed toward the best interests of the self. It is viewed as related to the probability that an individual will enter into, continue, and adhere to a specific change strategy. The TIP shows how substance use treatment staff can affect change by developing a therapeutic relationship that builds on and respects a patient's/client's autonomy while making the treatment clinician a partner in the change process. Treatment staff are encouraged to acknowledge the power of motivation in determining whether an individual's substance use will change and adopt motivation-enhancing techniques to increase participation in treatment.

**TIP 40: *Clinical Guidelines for the Use of Buprenorphine in the Treatment of Opioid Addiction***

- ✓ This TIP provides consensus as well as evidence-based guidance on the use of buprenorphine in the treatment of opioid addiction. It addresses a variety of topics on the subject, including physiology and pharmacology of opioids, opioid addiction and treatment with buprenorphine; screening and assessment of opioid addiction problems; detailed protocols for opioid addiction treatment with buprenorphine; management of special populations; and policies and procedures related to office-based opioid addiction treatment under the paradigm established by the Drug Addiction Treatment Act of 2000.

**TIP 42: *Substance Abuse Treatment for Persons with Co-Occurring Disorders***

- ✓ This TIP is a revision of TIP 9, *Assessment and Treatment of Patients with Coexisting Mental Illness and Alcohol and Other Drug Abuse*. It contains information about new developments in the rapidly growing field of co-occurring substance use and mental disorders while also capturing the state of the art in the treatment of people with these disorders. TIP 42 focuses on what the clinician needs to know and provides that information in an accessible manner. It synthesizes knowledge and grounds it in the practical realities of real situations and clinical cases so its reader will gain increased knowledge, resourcefulness and encouragement in working with individuals with co-occurring disorders.

**TIP 43: *Medication-Assisted Treatment for Opioid Addiction in Opioid Treatment Programs***

- ✓ This TIP incorporates the multitude of changes in medication-assisted treatment for opioid addiction (MAT) that have taken place over the most active decade of change since the inception of this treatment modality more than 40 years ago. It describes the nature and dimensions of opioid use disorders and their treatment in the United States, including principles underlying MAT and historical and regulatory developments.

**TIP 44: *Substance Abuse Treatment for Adults in the Criminal Justice System***

- ✓ This TIP was developed to provide best practice guidelines and recommendations to administrators and counselors based on the research literature and experience of seasoned treatment professionals. It covers all phases through which a person progresses in the criminal justice system as well as the full range of criminal justice settings. Both clinical and programmatic areas of treatment are addressed.

**TIP 45: *Detoxification and Substance Abuse Treatment***

- ✓ This TIP is a revision of TIP 19, *Detoxification from Alcohol and Other Drugs*. It provides the clinical, evidence-based guidelines, tools, and resources necessary to help substance abuse clinicians and counselors treat persons who are dependent on substances of abuse.

**TIP 49: *Incorporating Alcohol Pharmacotherapies into Medical Practice***

- ✓ Similar to many of the other TIPs, this one is both a revision and expansion of TIP 28, *Naltrexone and Alcoholism*. In addition, it includes a discussion of other FDA-approved medications for the treatment of alcohol use disorders (AUDs). Besides providing an overview of using medications in the treatment of AUDs, the TIP presents detailed information about each medication. The final chapter discusses factors for consideration in using medications to treat service recipients with AUDs. Handy, helpful resources for practitioners are contained in the appendices.

**TIP 51: *Substance Abuse Treatment: Addressing the Specific Needs of Women***

- ✓ This TIP was designed to focus on the important differences between men and women with regard to the physical effects of substance use and the specific issues related to substance use disorders. These recognitions further serve to reinforce that gender matters in treatment. Addressing women's specific needs from the outset improves treatment engagement, retention, and outcomes. Moreover, the TIP endorses the biopsychosociocultural framework based on clinical practice and research centered on women. The knowledge and models presented in the TIP are grounded in women's experiences, built on women's strengths, and based on the best promising or research-supported practices. Its primary goal is to assist substance abuse treatment providers in offering up-to-date, effective treatment to adult women with substance use disorders (SUDs).

**TIP 58: Addressing Fetal Alcohol Spectrum Disorders**

- ✓ This TIP was designed to help the clinician offer hope to persons with FASD when they present in their setting. It asks the clinician to consider FASD as a significant co-occurring life issue that should be recognized and incorporated into treatment planning. The TIP is further designed to help the clinician see pregnant women that drink alcohol through a lens of “need” rather than “judgment”. It guides the clinician in working with clients that seem to want to do well in treatment but can’t seem to follow directions or appear to not “get it” or appear resistant because they do not keep appointments, e.g., in a different light. The clinician may need to reframe his or her thinking about the client’s motives because an FASD could be involved.

## Smartphone App for Persons Recovering from Heroin Addiction.

The Ohio State University Wexner Medical Center has developed an app for Android smartphones to help heroin addicts with recovery. The app allows for ongoing, streamlined communication and resources at the touch of a button, providing 24/7 mobile counseling and social support to recovering heroin addicts. Persons recovering from heroin addiction can load up to 10 names of family, friends, counselors and other trusted supporters to their recovery circle screen. This group of supporters can receive instant texts during trigger times when temptation occurs and the likelihood of relapse is high. Texts can also be provided simply when an individual needs words of encouragement. There is a panic button that can be used to send a message immediately to the entire support circle that says: “I need help and I need it now.” Other app features include monitoring mood, stress level, and desire to use heroin; tracking accumulated days of sobriety and coins collected as awards for sobriety milestones; and motivational stories and testimonials from individuals in recovery to assist with staying clean and resisting the urge to use. The app can be downloaded for free from the Google Play Store (OSU Wexner Medical Center, n.d.). The app is titled *Squirrel Recovery; Addiction* from the Ohio State Innovation Foundation. Search for the app using the keywords “heroin addiction recovery”.

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*Treatment Resources*

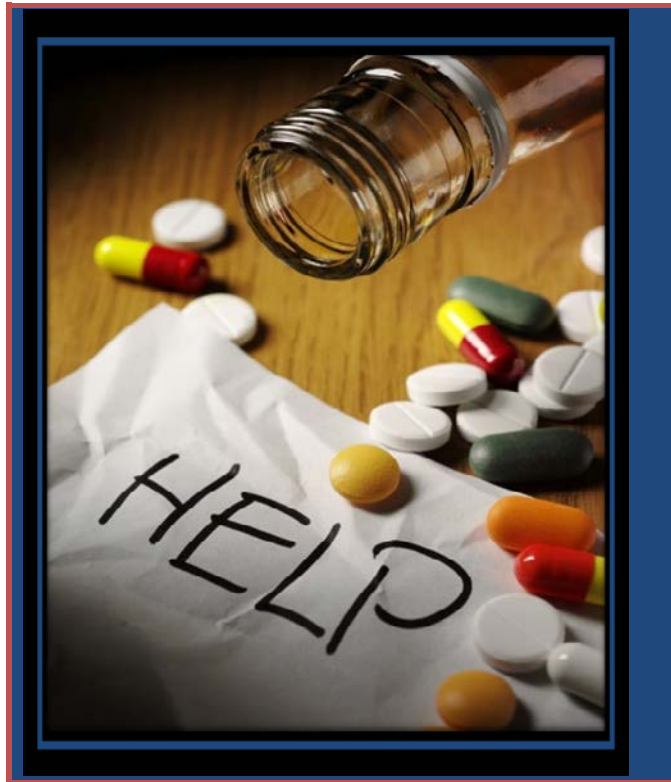
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Department of  
**Mental Health &  
Substance Abuse Services**



8/15/2016

**Substance Use Best Practice Tool  
Guide**

**CO-OCCURRING  
DISORDERS**

Division of Clinical Leadership in Collaboration with the  
Division of Substance Abuse Services

# Co-Occurring Disorders (CODs)

## Co-Occurring Disorders Defined

People with co-occurring disorders (CODs) have at least one diagnosable mental illness along with one or more substance use disorders (SAMHSA/CSAT, 2013; TNCODC, 2013). The American Society of Addiction Medicine (ASAM) expands the definition to cover co-occurring conditions (COCs). Individuals are said to have COCs if they have any combination of any substance use or addictive behavior or any mental health condition, whether or not the condition is associated with a formal diagnosis. This definition allows for the targeting of at-risk populations for prevention and early intervention services. Nevertheless, individuals with CODs were at one time bounced from

There are no specific combinations of mental disorders and substance use disorders that are uniquely defined as co-occurring disorders (SAMHSA, 2014b).

agency to agency with limited results, costing a good deal of time and money. Each disorder was treated separately. Today, individuals with symptoms of addiction or mental health can be screened for COD through any door. Persons with COD typically have more episodes of

relapse, more inpatient hospital visits, more emergency room visits, and higher rates of chronic diseases, such as high blood pressure, diabetes, hepatitis, and HIV/AIDS. COD is found among adolescents as well as adults (TNCODC, 2013).

There are no specific combinations of mental disorders and substance use disorders (SUDs) that are uniquely defined as co-occurring disorders (CODs). They may include any combination of at least two mental disorders and substance use disorders identified in the DSM-5. Sometimes co-occurring disorders are referenced as “dual disorders” or as “having a dual diagnosis” (SAMHSA, 2014b). The focus on CODs is largely based on the “No Wrong Door” principle promulgated in the Substance Abuse and Mental Health Services Administration’s (SAMHSA’s) Center for Substance Abuse Treatment (2000) report entitled *Changing the Conversation*. It is this principle that has not only guided policy but decision making about treatment for CODs. The principle takes into account that most persons with substance use issues do not have a single-targeted problem and that rehabilitation and treatment programs must adapt to meet the specific needs of each individual.

Roughly 50 percent of the people seeking substance use treatment will also have another significant mental disorder (Miller, Forchimes, & Zweben, 2011).

People with a mental health issue are more likely to experience substance use disorder (SUD) than those without a mental illness. In fact, Miller, Forchimes, & Zweben (2011) contend that roughly 50 percent of the people seeking substance use treatment will also have another significant mental disorder. CODs can be difficult to diagnose due to the complexity of the symptoms. In some cases, both disorders are severe; in some cases, both are mild; and in some cases, one disorder is more severe than the other. Integrated treatment is highly recommended for persons with CODs. Untreated, undertreated, and/or undiagnosed CODs tend to result in negative outcomes such as a greater likelihood of experiencing

homelessness, incarceration, suicide, medical illnesses, and early death (SAMHSA, 2014b). The most common cause of psychiatric relapse today in persons with COD is the use of substances. Similarly, the most common cause of relapse in substance use is untreated psychiatric disorder (Mental Health America, 2012). It is estimated that about two thirds of the 10 percent that account for most of the

**Two thirds of the 10 percent that account for most of the health care costs have a co-occurring disorder diagnosis (TNCOD, 2013).**

health care costs have a COD diagnosis (TNCOD, 2013).

Data from the 2013 National Survey on Drug

Use and Health (NSDUH) indicated that 3.2 percent of adults (ages 18 and older) in the United States had co-occurring “any mental illness” and substance use disorder (SUD). For adolescents, 1.4 percent had co-occurring major depressive episode and SUD (SAMHSA/CBHSQ, 2014). Statistics at Dual Diagnosis.org (n.d.) indicate that 51 percent of individuals with a mental disorder have at least one SUD and up to 66 percent of persons with an SUD have at least one mental disorder.

## Essential Programming Components

This section describes the essential programming components that should be developed by substance use treatment providers seeking to deliver integrated substance use and mental health services to individuals with co-occurring disorders (CODs). The elements constitute the best practices presently available for designing COD programs in substance use treatment agencies (SAMHSA/CSAT, 2013b).

### Screening, Assessment, and Referral.

The first step in being able to treat mental health disorders among people with substance use problems starts with recognition (Health Canada, 2007). Screening will help determine the likelihood that an individual has co-occurring substance use and mental disorders or that his or her presenting symptoms, signs, or behaviors may be influenced by co-occurring issues. Screening should be brief and occur soon after the person presents for services (SAMHSA/CSAT, 2006). Proper screening must occur, which involves, at the very least, asking the appropriate questions (Health Canada, 2007).

Clients with COD are best served when screening, assessment, and treatment planning are integrated, i.e., both substance use and mental health disorders, each in the context of the other, are addressed. The screening process should be comprehensive and include exploration of a variety of related service needs such as medical, victimization, trauma, housing, and so forth. In short, screening should expedite entry into appropriate services. Screening tools can be used because they offer efficiency and objectivity in gathering information. However, the screening process needs to be flexible enough to balance the need for consistency with the need to respond to important differences among individuals (SAMHSA/CSAT, 2006).

Integrated assessment should be used if screening points to the need for an in-depth assessment. Conducting an integrated assessment will assist in 1) making a formal diagnosis; 2) evaluating the

level of functioning; 3) determining the individual's readiness for change; and 4) making initial decisions about appropriate level of care. Moreover, the assessment process should be client-centered, i.e., ensure that the person's perceptions of his or her issues and goals he or she wishes to accomplish are central to the assessment as well as to the recommendations that derive from it (SAMHSA/CSAT, 2006).

Also part of integrated assessment is the identification of the interactions among the symptoms of mental disorders and substance use, as well as the interactions of the symptoms of substance use disorders and mental health symptoms. Integrated assessment further considers how all the interactions connect to treatment experiences, especially stages of change, periods of stability, and periods of crisis. Diagnosis is a critical part of the assessment process (SAMHSA/CSAT, 2013b).

In the event the screening/assessment process identifies a substance use or mental disorder that is beyond the resources and capacity of the provider agency, a referral should be made to an appropriate provider. There should further be mechanisms in place to ensure ongoing collaboration and consultation so the referral is appropriate to the treatment needs of the individuals with CODs (SAMHSA/CSAT, 2013b).

### ***Physical and Mental Health Consultation.***

Standard staffing should be expanded to include mental health specialists and to add consultation to the treatment services. Master's level clinical staff with strong diagnostic skills and expertise in working with persons having COD are recommended as such staff would strengthen the agency's ability to deliver appropriate COD services. Additionally, these staff could function as consultants to the rest of the team on mental health disorders. If the agency is unable to hire a psychiatrist on a consultative basis, a collaborative relationship with a mental health agency should be established to provide those services (SAMHSA/CSAT, 2013b).

### ***Prescribing Onsite Psychiatrist.***

Psychiatrists are critical to stable functioning and sustaining recovery for individuals with COD. Thus, every reasonable effort should be made to add an onsite psychiatrist to the staff of the substance use treatment agency. Having the onsite psychiatrist will help the agency overcome barriers observed in offsite referral such as travel and distance limitations, the separation of clinical services, fears of being stigmatized as "mentally ill", the inconvenience associated with the individual's enrollment in another agency, cost, and the challenges linked to comfort level with different staff (SAMHSA/CSAT, 2013b).

To help reduce costs for this component, the agency might consider hiring the psychiatrist on a part-time basis (i.e., between four to sixteen hours per week). However, some agencies may be able to hire a full-time psychiatrist or have him or her share full-time status with a nurse practitioner (SAMHSA/CSAT, 2013b). In Tennessee, we use nurse practitioners and physician assistants.

The benefits of an onsite psychiatrist are numerous. He or she can foster development of the substance use treatment staff, enhancing their skill and comfort in working with individuals that have COD. The psychiatrist might also upgrade the skills of licensed staff through seminars on medication management and other pertinent topics. Having an onsite psychiatrist adds an extremely

skilled professional to the treatment team, which should enhance the development of effective treatment plans for active cases involving persons with COD (SAMHSA/CSAT, 2013b).

Whenever possible, the substance use agency should hire a psychiatrist with expertise in COD, substance use treatment. Psychiatrists are typically certified by the American Academy of Addiction Psychiatry, the American Society of Addiction Medicine (ASAM), or the American Osteopathic Association (SAMHSA/CSAT, 2013b).

Finding a psychiatrist, even part-time, is difficult in our state. Ninety of the 95 counties (95%) have shortage area designations based on the limited number/lack of psychiatrists. Hence, treatment facilities may offer telebehavioral health services. Best practices in such services are available from the American Telemedicine Association (ATA). Clinical, technical, and administrative guidelines are provided.

### *Clinical*

1. Professional/Patient Identify/Location
  - ✓ Verify the patient's full name, using typical documents such as a government-issued ID.
  - ✓ Confirm and document where the patient/client will be receiving services. (Licensure is generally tied to the location where the patient/client is at the time of service. Mandated reporting issues are also tied to the patient/client's location at the time of service.)
  - ✓ Verify and exchange contact information.
  - ✓ Clarify expectations regarding contact (ATA, 2013).
2. Patient Appropriateness for Telehealth Services
  - ✓ The literature has not shown harm or negative benefits for telehealth services. Nevertheless, the patient/client's expectations and comfort level with telehealth services should be taken into account (ATA, 2013).
3. Informed Consent
  - ✓ Such should be conducted with the patient/client in real time. The document/discussion should contain the same components as for in-person care, including structure and timing of services, record keeping, scheduling, privacy, potential risks, confidentiality and any limits, etc. (ATA, 2013).
4. Physical Environment
  - ✓ Physical space of the professional and patient/client's room should aim to provide comparable, professional specifications as found in a standard services room. Also, any persons other than the professional or patient/client should be identified. Every reasonable effort should be undertaken to ensure a professional environment for services. Equipment quality should be good, at minimum (ATA, 2013).
5. Communication/Collaboration with Patient/Client's Treatment Team
  - ✓ Discuss coordination of care with a multidisciplinary team. As necessary, collaborative relationships should be developed with other telehealth professionals and/or community-based staff (ATA, 2013).
6. Emergency Management

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- ✓ Plan for patient/client's safety under various conditions of telehealth service delivery. This means that professionals should
  - a. Review the definition of "competence" for their particular profession in advance of providing telehealth services. Further professionals should have taken basic education and training in suicide prevention prior to telehealth service delivery.
  - b. Know the duty-to-notify laws as well as when involuntary hospitalization should be recommended.
  - c. Be familiar with the emergency procedures of the agency for which they are examining the patient/client.
  - d. Be familiar with emergency procedures in cases where other professional staff may not be immediately available.
  - e. Know how to respond when the patient/client is uncooperative during an emergency situation.
  - f. Have information about securing transportation for patients/clients under a variety of conditions.
  - g. Be familiar with how to contact local emergency personnel in the area where the patient/client is located (ATA, 2013).

### 7. Medical Issues

- ✓ Professionals should be familiar with the patient/client's prescription and medication dispensation options. Also, professionals should become familiar with the entity from which the patient/client is receiving medical services (ATA, 2013).

### 8. Referral Resources

- ✓ The professional delivering telehealth should familiarize himself/herself with local in-person resources in the event a referral may need to be made (ATA, 2013).

### 9. Community/Cultural Competency

- ✓ Professionals should deliver culturally competent services to the populations that they serve. Investigate recent significant events and cultural mores of the community in which the patient/client resides (ATA, 2013).

## *Technical*

### 1. Videoconferencing Applications

- ✓ Such applications should have been vetted and have appropriate verification, confidentiality, and security parameters necessary to be use for telehealth services. Also, do not allow social media functions or video chat room functions on software that will be used for these services (ATA, 2013).

### 2. Device Characteristics

- ✓ Professional grade or high quality cameras and audio equipment should be used for telehealth services whenever possible. The device should further have up-to-date antivirus software, personal firewall, and the latest security patches and updates. Professionals should have a back-up plan in place in the event of a technology breakdown that results in a disruption of the session. For example, the professional may call the patient/client on the telephone so they can attempt to continue to work through issues together (ATA, 2013).

### 3. Connectivity



### *Co-Occurring Disorders*

- ✓ The minimum recommended bandwidth for telehealth services is 384 Kbps, with higher bandwidths preferred. Resolutions should minimally be 640 x 360 at 30 frames per second (ATA, 2013).
4. Privacy
    - ✓ Plans to make recordings during service delivery should be discussed in advance, including how the information will be stored. Data sharing should also be addressed and clarified (ATA, 2013).

### *Administrative*

1. Qualifications/Training of Professionals
  - ✓ Staff should be appropriately credentialed to provide services. Check with the professional organization, licensure board, and/or other legal entities to verify the appropriateness of telehealth services for the patient/client (ATA, 2013).
2. Documentation/Record Keeping
  - ✓ Maintain an electronic record for each patient/client for whom services are provided. The record should include assessment, patient/client identification information, contact information, history, treatment plan, informed consent, and information about fees/billing. Documentation and access requirements shall comply with applicable Federal and jurisdictional laws (ATA, 2013).
3. Payment/Billing
  - ✓ Inform patient/client of any and all financial charges that may result from the services to be provided. Complete payment arrangement before services begin (ATA, 2013).

## **Medication and Medication Monitoring.**

Medication is necessary for many persons with COD to control their psychiatric symptoms and stabilize their psychiatric status. Having an onsite psychiatric will facilitate meeting the medication needs of individuals with COD for whom such is appropriate. The psychiatrist will further be able to provide appropriate medication monitoring and review medication adherence. Often combined psychopharmacological interventions in which the client receives medication to reduce cravings for substances as well as medication for a mental disorder are employed (SAMHSA/CSAT, 2013b).

## **Psychoeducational Classes.**

These classes generally focus on signs and symptoms of mental disorders, effects of mental disorders on substance use problems, and medication. They help to raise awareness about the individual's COD and provide a positive and safe context in which to handle the information. A wide array of information in the form of pamphlets from government agencies and/or advocacy groups is also available to explain CODs in language that is very comfortable for the individual (SAMHSA/CSAT, 2013b).



## **Onsite Double Trouble Groups.**

These groups provide a forum for discussion of the interrelated problems of mental health disorders and substance use, helping individuals identify their triggers for relapse. In these forums, individuals describe their psychiatric symptoms and their urges to use substances. Individuals are encouraged to use discussion to deal with these urges rather than to act on their impulses. Sometimes these groups focus on helping individuals monitor the extent to which they adhere to taking their medication appropriately, psychiatric symptoms, substance use, and their adherence to attending/participating in scheduled meetings (SAMHSA/CSAT, 2013b). Double Trouble in Recovery (DTR) is a 12-step, peer support group that addresses both substance use and mental health.

## **Offsite Dual Recovery Self-Help Groups.**

There are typically a variety of dual recovery mutual self-help groups in the communities in which individuals with COD reside. Hence, substance use agencies likely make referrals to these groups. Similar to psychoeducational classes, these groups also provide safe forums for discussing mental health issues, substance use issues, and medication. These groups offer an understanding, supportive environment where coping skills can be shared (SAMHSA/CSAT, 2013b).

## **Treatment**

Understanding that substance use and mental health issues interact with each other is important as a co-occurring disorder (COD) can complicate recovery if it is not adequately addressed at the same time (CMCS, 2014). In working successfully with individuals that present with CODs, it is initially important to establish a successful therapeutic relationship. Research wholeheartedly supports the fact that clients, specifically those with COD, are much more responsive when the therapist acts consistently in a nonjudgmental and nurturing way. Of course, the comfort level of the clinician can impact his/her ability to build an appropriate therapeutic alliance with the client. Therefore, it is imperative that he or she recognize certain patterns that might invite unsettling feelings regarding the client and not let those feelings interfere with appropriate treatment. Clients presenting with COD frequently experience despair and demoralization because of the complexity of having more than one problem and difficulty achieving treatment success. Encouraging hope helps to give clients with COD at least short-term relief in exchange for long-term work, despite some uncertainty regarding benefit and time frame (SAMHSA/CSAT, 2013b).

Working with clients that have COD can be challenging. Many individuals that use substances may additionally present with some antisocial-type traits. Thus they are less amenable to treatment, pharmacological or psychosocial, and may work to avoid contact with treatment staff (SAMHSA/CSAT, 2013b). The problem becomes extremely difficult if the client with COD has both a substance use disorder and a diagnosis of schizophrenia. The literature emphasizes that substance use is one of the most common comorbid conditions for clients with this particular mental disorder (Schwartz, Hilscher, & Hayhow, 2007). A consensus panel recommends the following strategies in forming a therapeutic alliance with clients that have problems with COD:

- Show acceptance and understanding of the client.
- Assist the client in clarifying the nature of his/her problem.

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- Indicate to the client that the he or she and you, the clinician, will be working collaboratively.
- Communicate to the client that, as the clinician, your role will be helping him/her to help himself/herself.
- Demonstrate empathy and a willingness to really listen to the way the client defines his/her problem.
- When necessary, help the client to solve some external problems immediately and directly.
- Genuinely foster hope for positive change (SAMHSA/CSAT, 2013b).

It will be important for clinicians to promote a recovery perspective. Treatment plans should be developed in such a way as to provide for continuity of care over time. This means that the treatment plan, like the assessment process, should also be client centered. Components of a client-centered treatment plan are shown in Table 1 below.

**Table 1. Components of a Client-Centered Treatment Plan**

<b>Acute Safety Needs</b>	<b>Determines need for immediate acute stabilization to establish safety prior to routine assessment</b>
<b>Severity of Mental and Substance Use Disorders</b>	Guides choice of most appropriate setting for treatment
<b>Appropriate Care Setting</b>	Determines client's program assignment
<b>Diagnosis</b>	Determines recommended treatment intervention
<b>Disability</b>	Determines case management needs as well as whether enhanced level of intervention is required
<b>Strengths and Skills</b>	Determines areas of prior success around which to organize future treatment interventions along with determining areas of skill-building needed for management of either disorder
<b>Availability and Continuity of Recovery Support</b>	Determines whether continuing relationships need to be established as well as availability of existing relationships to provide contingencies to promote learning
<b>Cultural Context</b>	Determines most culturally appropriate treatment interventions/settings
<b>Problem Priorities</b>	Determines problems to be solved specifically, along with opportunities for contingencies to promote treatment participation
<b>State of Recovery/Client's Readiness to Change</b>	Determines appropriate treatment interventions and outcomes for client at given stage of recovery or readiness for change

Source: SAMHSA/CSAT, 2006.

Maintaining a recovery perspective also means devising treatment interventions that are specific to the challenges and tasks that may be encountered at each stage of the COD recovery process. Make every effort to gain a thorough understanding of the interrelationship between stages of change and stages of treatment. The expectation for the client's progress through treatment stages must be consistent with his/her stage of change (SAMHSA/CSAT, 2013a; SAMHSA/CSAT, 2013b). Stages of changes are delineated in the table below.

**Table 2: Stages of Change**

<u>Stage</u>	<u>Characteristics</u>
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<b>Precontemplation</b>	Change is not a possible goal in the foreseeable future; may be under aware or unaware of problems.
<b>Contemplation</b>	Awareness that a problem exists and thinking seriously about overcoming it, but no commitment to take action yet made; weighing pros and cons of the problem and its solution.
<b>Preparation</b>	Combines intention and behavior—action is planned within the next month, and action has been taken, though unsuccessfully in the past year; some reductions have been made in problem behaviors, but criterion for effective action has not been determined.
<b>Action</b>	Behavior, environment, or experiences are modified to rise above the problem; successful change of addictive behavior for anywhere between a single day to six months ( <i>Note: Action does not equal Change; only total abstinence counts.</i> )
<b>Maintenance</b>	Working to prevent relapse and consolidate gains attained during the Action stage; remaining free from addictive behavior and engaging consistently in new incompatible behavior(s) for longer than six months.

Source: SAMHSA/CSAT, 2013a; SAMHSA/CSAT, 2013b.

## Integrated Treatment.

The preferred treatment for people with COD is integrated. Integrated treatment encompasses any mechanism by which treatment interventions for COD are combined within the context of a primary treatment relationship or service setting. It is effective in treating both disorders, related problems, and the whole person (SAMHSA/CSAT, 2013b). SAMHSA recommends and supports the use of integrated treatment for persons with CODs. Dealing with mental health and substance use issues simultaneously lowers cost while creating better treatment outcomes (SAMHSA, 2014a). Combining strategies from addiction treatment and psychiatry can lower the relapse rate among rehab graduates, foster long-term abstinence, and reduce the number of suicide attempts (DualDiagnosis.org, n.d.). Furthermore, the treatment should be culturally competent, provided in the context of the client's language, culture, socioeconomic status, gender, age, ethnicity, geographic area, sexual orientation, religion, spirituality, and any cognitive or physical disabilities. Integrated treatment utilizes integrated interventions as well. Among the techniques that might be used are:

- Combined pharmacological interventions in which individuals receive medication to reduce cravings for substances as well as medication for a mental disorder.
- Dual recovery groups where recovery skills for both disorders are discussed).
- Dual recovery mutual self-help meetings.

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- Group interventions for persons with the triple diagnosis of substance use disorder, mental disorder, and trauma, or which are designed to meet the needs of persons with COD and another shared problem such as homelessness or criminality.
- Integrated screening and assessment processes.
- Motivational enhancement interventions (group or individual) that address issues related to both substance use and mental health problems (SAMHSA/CSAT, 2013b).

These interventions can be part of a single program or employed in multiple program settings (SAMHSA/CSAT, 2013b). The interactive nature of the disorders requires that each be continually assessed and treatment plans adjusted accordingly. It is an utter disservice to individuals with COD to emphasize attention to one disorder at the expense of the other. The relationship between the disorders is always there and must therefore routinely be evaluated and managed. Integrated services can be provided by an individual clinician, a clinical team that assumes responsibility for the provision of integrated services to the client, or an organized program in which all clinicians or teams provide appropriately integrated services to all clients. (SAMHSA/CSAT, 2007).

Hazelden-Betty Ford has a Co-Occurring Disorders Program that offers an integrated treatment approach for persons with non-severe psychiatric disorders that co-occur with substance use disorders. Consistent with the vision of integrated services, the program is designed to help people recover by offering both substance use and mental health services at the same time and in a single setting. They use the treatment modalities of cognitive-behavioral therapy, motivational enhancement therapy, 12-step facilitation therapy (Hazelden Publishing, n.d.a). Dartmouth Psychiatric Rehabilitation Center and Hazelden-Betty Ford also have a program for CODs with an elevated mental health acuity (IDDT)—Integrated Dual Disorders Treatment for the severely mentally ill.

In January 2010, SAMHSA released an Integrated Treatment for Co-Occurring Disorders Evidence-Based Practices (EBP) Kit. The kit can be ordered and/or downloaded at no charge from the SAMHSA Web site at <http://store.samhsa.gov/product/SMA08-4367>. Key elements in the kit are:

- Cognitive-behavioral approach.
- Cross-trained practitioners.
- Integrated medication services.
- Integrated services.
- Motivational interventions.
- Multiple formats.
- Stage-wise treatment (SAMHSA, 2014a).

Systems integration supports the provision

The overall vision of an integrated system is to effectively serve individuals with CODs no matter where they enter the system (SAMHSA, 2014a).

of integrated services and may include any or all of the following: integrated system planning/implementation; continuous quality improvement; and mechanisms for addressing regulations and policies, program design and certification, financing, inter-program collaboration and consultation, clinical ‘best practice’ development, clinician licensure, competency and training, information systems, data collection, and outcome evaluation (SAMHSA/CSAT, 2007). The overall vision of an integrated system is to effectively serve individuals with CODs no matter where they enter the system (SAMHSA, 2014a).

Dr. Larke Nahme Huang, Director, Office of Behavioral Health Equity at SAMHSA is concerned that many care providers on both sides, mental health and substance use, do not possess the training necessary to treat COD in an integrated way. She expresses that whoever is doing the treatment--whether it is a psychiatrist, psychologist, counselor, or social worker--must have the expertise to treat the COD. In addition, clinicians must have training to simultaneously screen for the substance use and mental health conditions (Knopf, 2015).

## **Suicidality.**

Suicidality, which ranges from ideation (i.e., thoughts of suicide and making suicide plans) to suicide attempts to completed suicide, is a major public health problem (SAMHSA/CSAT, 2013b). The act of suicide is particularly traumatic, especially for family and friends. In addition to experiencing the five stages of grief and loss, survivors of suicide are left with more questions than answers.

Current data show higher suicidal behaviors among persons with a substance use disorder and

**Clients with COD, in particular those with substance use and affective disorder, have two of the highest risk factors for suicide (SAMHSA/CSAT, 2013b).**

particularly troublesome statistics for many clients with COD. People that have mental disorders are at 10 times greater risk for suicide than the general population. Furthermore, the risk of suicidal behavior and suicide increases with nearly

every major mental disorder (SAMHSA/CSAT, 2013b). Ninety percent of adults that commit suicide have a mental disorder (Centre for Suicide Prevention, 2014). Most often the disorder is PTSD or a major affective illness. Clients with COD, in particular those with substance use and affective disorder, have two of the highest risk factors for suicide (SAMHSA/CSAT, 2013b). Nevertheless, persons with substance use disorders (SUDs) alone are six times more likely to commit suicide than the general population (Ross, 2014).

Alcohol has been implicated as a primary culprit in suicidal behaviors. Using meta-analysis, a group of researchers addressed the association between alcohol use disorder (AUD) and suicide. They observed a significant association between AUD and suicidal ideation, suicide attempt, and completed suicide. They concluded that AUD could be considered an important predictor of suicide and a great source of premature death (Darvishi, Farhadi, Haghtalab, & Poorolajal, 2015).

Approximately 70 percent of individuals who commit suicide by intentional overdose use only a single substance to achieve their goal, and for 80 percent of those suicides, the drug of choice is a prescription medication. Persons who commit suicide with two or more substances most often combine alcohol with a prescription drug. Compared to men, women are four times more likely to intentionally kill themselves with alcohol and/or drugs. White men intentionally kill themselves with

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alcohol and/or drugs about twice as often as Black men. Nearly 20 percent of people between the ages of 40 and 64 who commit suicide do so with alcohol or drugs (Elements Behavioral Health, 2013).

Substance use has been identified as the top risk factor for suicide in youth by both the American Psychiatric Association and the American Academy of Child and Adolescent Psychiatry. Findings from a study examining 2001 to 2009 Youth Risk Behavior Survey (YRBS) data indicated that:

- A history of substance use was an independent, strong risk factor for adolescent suicide ideation, plans, and attempts.
- Illegal substances (e.g., methamphetamine, steroids, heroin) had a higher association with suicidal thoughts and behaviors than legalized substances, though any substance was associated with increased risk of suicide attempts.
- The strongest association with suicidal ideation, planning, attempts, and attempts requiring medical attention was found for heroin, followed by methamphetamines.
- Adolescents reporting an increased number of substances used in their lifetime reflected increased risk of suicidal ideation, planning, attempts, and attempts that required medical attention (Wong, Wong, Goebert, & Hishinuma, 2013).

Studies have shown that the most promising way to prevent suicide and suicidal behavior in persons with COD is through early recognition and treatment of substance use and mental illnesses. If clients mention sadness or depression or appear to be experiencing those emotions, it is essential that the extent to which suicidal thinking is present be explored. Similarly, clinicians should clarify and monitor clients that report thinking of doing harm to someone else. In short, clinicians should ask explicitly about suicide or the intention to do harm to another person when screening and/or assessment indicates that either of those possibilities is an issue (SAMHSA/CSAT, 2013b). Let the patient/client know that he/she is not alone, that someone cares, and that there is hope (Ross, 2014). In addition, clinicians should routinely follow up on appointments missed by clients that have presented with sadness and/or depression (SAMHSA/CSAT, 2013b). Try collaborating with the individual and his or her family/significant others to create a recovery plan that first ensures safety and also addresses the underlying issues (Ross, 2014). A substance use professional may need to secure the services of an appropriate mental health professional for the client and have the client closely monitored by that professional. Twenty-four hour coverage should be made available, such as hotlines for the client to call for help during non-business hours. (SAMHSA/CSAT, 2013b). The following treatment regimen incorporating cognitive therapy has been recommended for suicidal patients/clients with SUDs:

#### Early Phase

The clinician will:

- ✓ Conduct an assessment of the presenting problem (SAMHSA/CSAT, 2015). For adolescents in particular, gathering information about the lifetime number and types of substances used will be extremely helpful in informing suicide risk (Wong et al., 2013).
- ✓ Develop a safety plan with the patient/client.



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- ✓ Develop a cognitive case conceptualization involving identification and characterization of the patient/client's dispositional vulnerability factors, key automatic thoughts, beliefs (core, anticipatory, relief-oriented, and permissive), early experiences, and suicide-relevant cognitive processes.
- ✓ Establish treatment goals with the patient/client.

### *Intermediate Phase*

The clinician will help the patient/client:

- ✓ Add to the number of reasons for living.
- ✓ Develop coping strategies.
- ✓ Increase compliance with other services.
- ✓ Enhance social resources.

### *Late Phase*

Together the clinician and patient/client will:

- ✓ Work to consolidate the skills learned in treatment.
- ✓ Work on relapse prevention.
- ✓ Review progress toward treatment goals.
- ✓ Prepare for termination of the acute phase of treatment (SAMHSA/CSAT, 2015).

Research has suggested that substance use prevention is the best strategy for suicide prevention. In fact, the connection between suicide prevention and the prevention/treatment of substance use is either explicitly or implicitly addressed in each of the 13 goals of the recently revised National Strategy for Suicide Prevention (NSSP). Among the actions that should be taken are:

- ✓ Train staff in substance use treatment settings to ask their patients/clients directly and nonjudgmentally whether they are having thoughts of suicide or think things would be better if they were dead. These questions should be part of intake and repeated periodically throughout the course of treatment. All questions should be posed in a way that opens the door for a truthful response.
- ✓ Work with patients/clients, families and/or other social groups, and communities to reduce access to drugs, especially access to lethal amounts of drugs among persons at increased risk for suicide. Such efforts might include reducing inventory of locking up commonly abused medications; and encouraging proper disposal of unneeded and/or unused prescription drugs medications kept in the home (Litts & Carr, 2013).

Every reasonable effort should be undertaken to strengthen the collaboration between substance use, mental health, and suicide prevention actions at all levels—community, state, and nation.

TDMHSAS has a statewide crisis number: **855-CRISIS-1 (855-274-7471)**. Help is available 24 hours a day, 7 days a week. Suicide screening tools are located in the *Screening Tools*



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module of this document. An extensive discussion of this topic can be found in Chapter 8 under “Cross-Cutting Issues” of TIP 42 (i.e., Treatment Improvement Protocol: Substance Abuse Treatment for Persons with Co-Occurring Disorders), as well as in Appendix D of TIP 42. Chapter 4 in TIP 42 provides detailed information on screening for suicide risk. TIP 50, Addressing Suicidal Thoughts and Behaviors in Substance Abuse Treatment, is another excellent resource.

In addition, TDMHSAS has been awarded two five-year grants to reduce suicidal ideation, suicide attempts, and deaths resulting from suicide by developing and implementing cross-system suicide prevention strategies. Strategies will include rapid and enhanced follow-up as well as prevention training for providers and stakeholders statewide. The *Tennessee TARGET Zero Suicide* project is designed for working-age adults 25-64 years and *Tennessee Lives Count-Connect (CONNECT)* is aimed at youth and young adults ages 10-24 years. Partnerships will be developed with gatekeepers (schools, law enforcement, foster care, etc.), emergency departments, and inpatient psychiatric units to ensure success of the projects (M. Murphy, July 1, 2016, personal communication).

## **Trauma Informed Care.**

Persons with COD have likely experienced a great deal of trauma in their lives. In the United States, 51 percent of women and 61 percent of men have reported exposure to at least one lifetime traumatic event (Recoverymonth.gov, 2016). Thus, clinicians should consider the possibility of a trauma history even before any screening/assessment begins. Trauma may encompass experiences of rape or interpersonal violence as an adult; early childhood sexual, physical, or emotional abuse; and/or traumatic experiences associated with political oppression, as could be the case with refugees or other immigrant populations. The client should be approached with sensitivity, in consideration of the possibility that he or she has indeed suffered previous traumatic experiences that could interfere with his/her ability to be trusting in a therapeutic relationship. Any guardedness on the part of the client may indicate the possibility of trauma, so make every effort to promote safety in your interactions with him or her. Provide support and gentleness rather than trying to “break through” evasiveness that may erroneously be perceived initially as resistance or denial. Any questioning of the client should avoid “re-traumatizing” the client. SAMHSA/CSAT has released a TIP (TIP 57) that addresses the issue of trauma. (See SAMHSA, 2014d). Clinicians are asked to engage patients/clients with appropriate sensitivity (SAMHSA/CSAT, 2013b).

Behavioral health treatment providers are becoming increasingly aware that they are encountering a very large number of men and women who are survivors of traumas, including childhood physical and sexual abuse. Many clinicians have moved to the approach called **Trauma-Informed Care** (TIC) to help make treatment more appropriate and effective. TIC emphasizes how services must take into account an understanding of trauma, and place priority on the **safety, choice and control** of trauma survivors. Clients may choose to seek out specific trauma treatments to work through and minimize the consequences of a traumatic event in some cases. These specific treatments employ different ways to work with clients so they are able to understand, manage, and transform the aftereffects of trauma (California Department of Health Care Services, n.d.).

Select trauma screening tools are included in the *Screening Tools* module of this document.

## Treating Adolescents with Co-Occurring Disorders.

It has become the rule rather than the exception to recognize comorbidity among adolescents with substance use disorders. Evidence for integrated or co-occurring treatment for young people is growing. For example, evidence continues to mount that identifying and treating depression in young people that are substance involved improves substance use outcomes. The literature indicates that the converse is also true (ASAM, 2013). Among those youth entering substance use treatment, 83 percent of females and 62 percent of males also have an emotional disorder (Hazelden, n.d.b). David Rotenberg of Caron Treatment Centers, e.g., says that any credible provider of behavioral health services will do an integrated treatment of both the substance use and mental health issue concurrently (Knopf, 2015).

As with adults, it is often impossible to say with confidence which problem came first. In one case, an individual develops anxiety based on a childhood trauma and turns to drugs to cope, developing an addiction. In another case, the individual has negative experiences from his or her heroin use, which then leads to post-traumatic stress disorder (PTSD). In most cases, however, the scenarios are rarely clear cut. Nonetheless, the important thing is the need to provide treatment for both problems. Sometimes the fact that the different specialists cannot or do not coordinate treatment for the various problems presents a real challenge in the treatment of CODs, for adults and young people alike. Similar to treatment for adults, treatment must focus on the whole person (Bellum, 2012).

There are a number of interventions that work for young people with co-occurring disorders. Support groups are an important component. The youth support each other as they learn about the negative role that drugs and alcohol have had on their lives. They also learn social skills, as well as how to replace substance use with new behaviors and thoughts. The youth get help with concrete situations that arise because of their mental illness. Programs that have support groups for family members and friends help to enhance outcomes (NAMI Minnesota, n.d.).

Here are tips for parents/caregivers of young people with co-occurring disorders, of which one is a substance use issue:

1. **Don't** regard the substance issue as a family disgrace. Focus on the realization that recovery is possible just as it is with other illnesses.
2. **Do** encourage and facilitate participation in support groups during and after treatment.
3. **Don't** preach, lecture, or nag.
4. **Don't** lay on guilt by using the "if you loved me" approach. It is like saying, "If you loved me, you would not have tuberculosis."
5. **Do** establish consequences for behaviors. Don't be afraid to involve law enforcement if your teen engages in and/or promotes underage drinking on your premises. You can be held legally responsible for endangering minors if you do not take timely action.

### *Co-Occurring Disorders*

6. **Do** avoid making threats unless you think them through carefully and definitely intend to carry them out. Idle threats only make the person with an SUD feel you don't mean what you say.
7. **Do** encourage your teen to engage in after-school activities, such as sports or debate team, with adult supervision during recovery. Part-time employment or volunteer work can build also self-esteem.
8. **Don't** expect an immediate, 100-percent recovery. Like any illness, there is a period of convalescence. There may be relapses and times of tension and resentment among family members.
9. **Do** offer love, understanding, and support during the recovery (NAMI Minnesota, n.d.).

Experts contend that tackling behavioral problems early can change the trajectory of co-occurring disorders in adolescence. Children with behavioral problems in their elementary school years have high risk for developing SUDs. Good parenting and early intervention have been recommended to ameliorate at least some of the risk (Knopf, 2015).

## **What Research Says about Provider Assessment Practices for Adolescents with Co-Occurring Disorders (CODs).**

A study by Lichtenstein, Spirito, & Zimmermann (2010) assessed the typical practice of providers in employing assessments with adolescents with co-occurring depression and substance use. Structured interviews were conducted with 30 providers that were on staff at either primarily substance use agencies or primarily mental health agencies. Interview findings follow:

- One hundred percent of mental health providers reported treating adolescents with co-occurring disorders.
- Eighty-two percent of substance use providers reported treating adolescents with co-occurring disorders.
- Slightly more than 40 percent of mental health providers conducted formal assessments for depression.
- Nine percent of substance use providers conducted formal assessments for depression.
- Only five percent of mental health providers conducted formal assessments for substance use.
- More than half of the substance use providers conducted formal assessments for substance use.

### *Co-Occurring Disorders*

- Sixteen percent of mental health providers reported using a specific treatment protocol for co-occurring diagnoses.
- None of the substance use providers reported using a specific treatment protocol for co-occurring diagnoses (Lichenstein et al., 2010).

The Lichenstein et al. (2010) study involved only 30 providers from a single city in one geographical region of the country. However, it provided useful information about assessment and treatment of adolescents with co-occurring disorders by community mental health and substance use treatment providers. First and foremost, the study indicated that providers were failing to adequately assess for co-occurring mental health and substance use disorders among adolescents. This finding was particularly concerning because leaving a disorder untreated or undiagnosed can only serve to exacerbate the youth's problem. Then there is the issue of providers rarely using treatment protocols that address the multiple problems of adolescents with COD, a function of the failure to conduct assessments. Hence, providers may be missing the mark on treatment interventions, evidence based or otherwise.

## **Co-Occurring Disorder Program Types in Tennessee**

### **Dual Diagnosis Capability Measures.**

Dual diagnosis capability measures have been developed to assess co-occurring capacity at the treatment-provider-organization level and quality improvement activities for the organizations (ASAM, 2013). SAMHSA has promoted two practical measures of program-level capacity to address co-occurring disorders: Dual Diagnosis Capability in Addiction Treatment (DDCAT) and Dual Diagnosis Capability in Mental Health Treatment (DDCMHT). The measures supply standardized, objective, comparable benchmarks for co-occurring services in substance use only and mental health only programs. Both measures examine seven areas (SAMHSA, 2014a):

- Program structure.
- Program milieu.
- Assessment.
- Treatment
- Continuity of care.
- Staffing.
- Training. (SAMHSA, 2014a).

Treatment programs are ranked along a continuum from Addiction or Mental Health-Only Services, Dual Diagnosis Capable, and Dual Diagnosis Enhanced (SAMHSA, 2014a).

## **Tennessee COD Programs.**

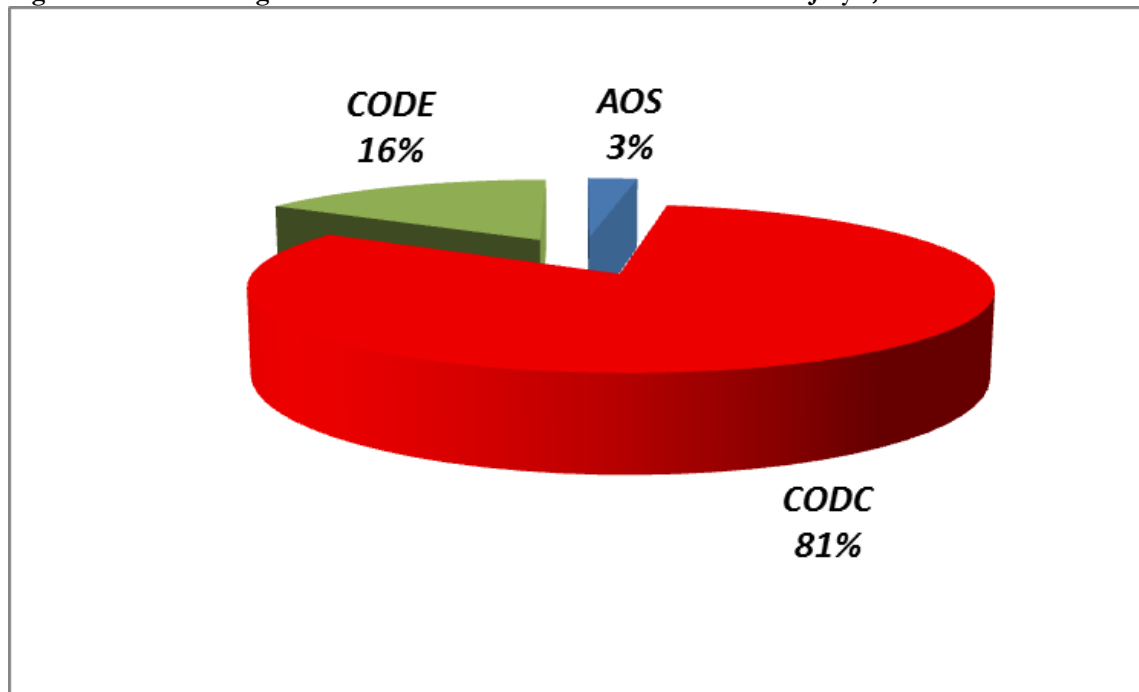
Co-occurring capable addiction treatment programs (i.e., dual diagnosis capable programs) tend to serve a diverse population. If some of the persons in such a program have no mental health condition or trauma history, they will only receive addiction-focused treatment. Most persons in co-occurring capable addiction treatment programs will have a range of mental health conditions, trauma issues, and/or cognitive/learning issues. A typical program will be able to manage a small percentage of persons who have more serious psychiatric conditions as well as persons who may intermittently have flare-ups of acute symptoms but do not need acute mental health treatment. These types of clients will still be interested in receiving addiction treatment and, with support, be capable of succeeding in the addiction program. Enhanced programs (i.e., dual diagnosis enhanced programs) are designed to routinely deal with clients who have mental health or cognitive conditions that are more acute or associated with more serious issues. These programs will have higher levels of staffing, smaller patient (client)-to-staff ratios, and typically a high mix of mental health specialty staff than the “capable” programs (ASAM, 2013).

The Tennessee Department of Mental Health and Substance Abuse Services (TDMHSAS) contracts with numerous treatment providers that are recognized as Co-Occurring Disorder (COD) providers. For the most part, these providers operate either Co-Occurring Disorders Capable (CODC) programs or Co-Occurring Disorders Enhanced (CODE) programs (TDMHSAS/DSAS, 2014).

CODC programs address co-occurring mental and substance –related disorders in their policies and procedures, assessment, program content, treatment planning, and discharge planning. Even when the programs are geared primarily toward treating mental health or substance use disorders, program staff address the interaction between mental and substance use disorders, along with their effect on the individual’s readiness to change through individual and group program content. Relapse and recovery environment issues are also addressed (TDMHSAS/DSAS, 2014).

CODE programs provide a higher level of integration of mental health and substance use treatment and recovery services. They provide unified and integrated substance use and mental health treatment and recovery to persons who have disabling or unstable co-occurring disorders. The programs typically are indistinguishable as either a mental health or addiction treatment and recovery program (TDMHSAS/DSAS, 2014).

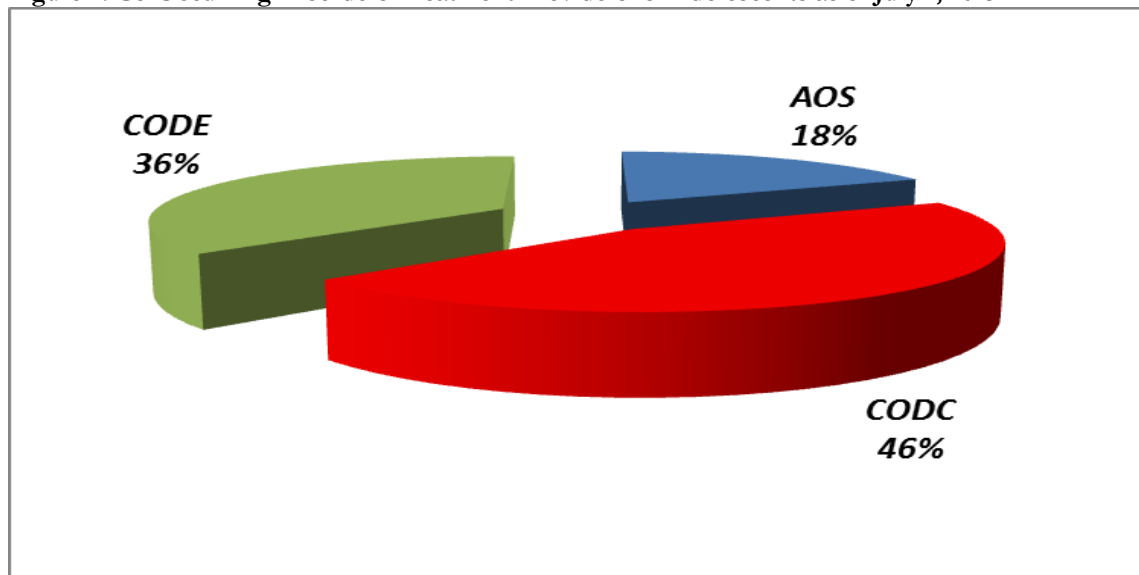
Figure 1. Co-Occurring Disorders Treatment Providers for Adults as of July 1, 2015



Source: K. Horvath, June 25, 2015, personal communication

As of July 1, 2015, there were 37 COD treatment providers for adults funded through the Federal Substance Abuse Prevention and Treatment (SAPT) Block Grant. Approximately 81 percent of the providers will have co-occurring capable (CODC) programs. Less than three percent will offer addiction only services (AOS) (K. Horvath, June 25, 2015, personal communication).

Figure 2. Co-Occurring Disorders Treatment Providers for Adolescents as of July 1, 2015



Source: K. Horvath, June 25, 2015, personal communication

For COD treatment providers serving adolescents and funded through the SAPT Block Grant, almost half have co-occurring capable (CODC) programs as of July 1, 2015. However, close to 20 percent were providing addiction only services (AOS). All total, there were 11 COD treatment providers as of July 1, 2015 (K. Horvath, June 25, 2015, personal communication).

## Co-Occurring Addiction and Psychiatric Disorders


Some of the most common psychiatric disorders seen in patients with co-occurring addiction issues include (SAMHSA/DPT, n.d.).

- **Anxiety and mood disorders, including major depression (SAMHSA/DPT, n.d.).**  
Nearly 20 percent of Americans with an SUD also have an anxiety or mood disorder and almost 20 percent of persons with an anxiety or mood disorder such as depression have an SUD (ADAA, n.d.).
- **Attention deficit disorder (SAMHSA/DPT, n.d.).**  
Among adults being treated for SUD, the rate of attention deficit disorder is about 25 percent. The attention disorder is five to 10 times more common among adults who are alcoholics than in adults without the condition. Moreover, it is more common for youth with attention disorders to begin using alcohol in their teenage years, with studies hovering around a mean starting age of 15 years (Goldberg, 2014)
- **Bipolar disorder (SAMHSA/DPT, n.d.).**  
A national study revealed approximately 56 percent of people with bipolar had experienced SUD during their lifetime (DualDiagnosis.org, n.d.).
- **Borderline personality disorder (BPD) (SAMHSA/DPT, n.d.).**  
A large survey found that almost 51 percent of people with a lifetime diagnosis of BPD also had an SUD over the previous 12 months. The same survey also found that, for individuals with a lifetime diagnosis of an SUD, about 10 percent also had a lifetime diagnosis of BPD, an incidence of BPD significantly higher than in the general public (SAMHSA, 2014c).
- **Conduct disorders (SAMHSA/DPT, n.d.).**  
Early substance use is typically a symptom of conduct disorder (CMHF, 2003). Recent statistics show these disorders as the number one co-occurring condition with SUDs (Knopf, 2015).
- **Pathological gambling (PG) (SAMHSA/DPT, n.d.).**  
A nationally representative study found that overlapping criteria of PG with those for SUD were frequently acknowledged by persons meeting the PG diagnoses (Wareham & Potenza, 2010).
- **Post-traumatic stress disorder (PTSD) (SAMHSA/DPT, n.d.).**  
One national epidemiologic study has shown that 46 percent of people with lifetime PTSD also met criteria for SUD. Another national epidemiologic study showed the breakdown by gender, with nearly 28 percent of women and 52 percent of men with lifetime PTSD also having SUD (Hamblen & Kivlahan, 2014).
- **Schizophrenia (SAMHSA/DPT, n.d.).**  
About half of persons with schizophrenia also present with a lifetime history of SUD, a rate that is much higher than seen in the general U.S. population (Volkow, 2009).



- Eating disorders (SAMHSA/DPT, n.d.).  
Research shows that as many as 35 percent of individuals with SUD also have an eating disorder. Additionally, up to 50 percent of those with eating disorders have a concurrent SUD (Addiction.com, 2010).

## More Co-Occurring Disorders Facts



**? DID YOU KNOW ?**  
Nearly half of people with severe mental illness are affected by substance use.

**? DID YOU KNOW ?**  
37% of persons that abuse alcohol and 53% of persons that abuse drugs also have at least one serious mental illness.

**? DID YOU KNOW ?**  
An estimated 50% of homeless adults with serious mental illnesses have a co-occurring SUD.

**? DID YOU KNOW ?**  
16% of jail and prison inmates are estimated to have severe substance use and mental disorders.

**? DID YOU KNOW ?**  
72% of detainees with mental disorders also have a co-occurring SUD.

Source: HealthyPlace.com, 2014.

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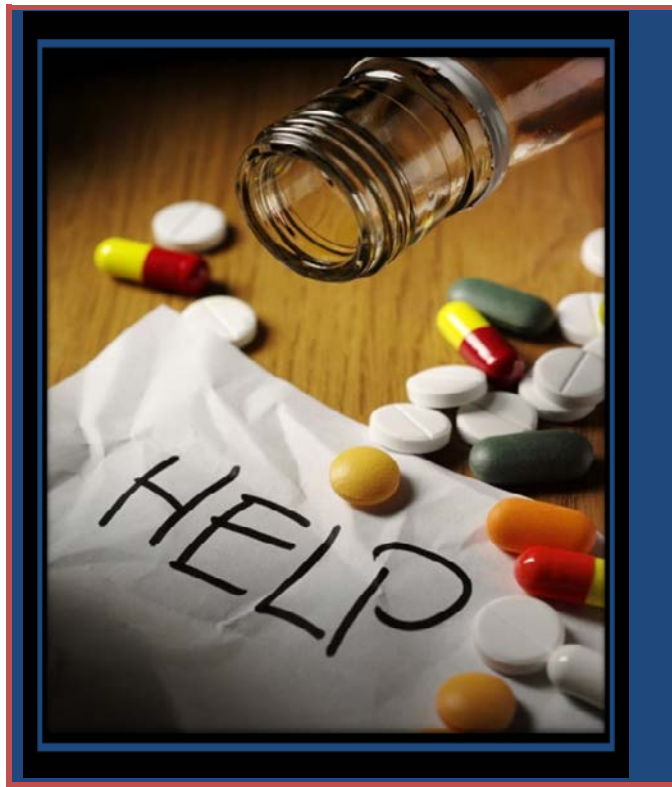
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Department of  
**Mental Health &  
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8/15/2016

**Substance Use Best Practice Tool  
Guide**

**SPECIAL POPULATIONS**

Division of Clinical Leadership in Collaboration with the  
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**Substance Use Best Practice Tool  
Guide**

**WOMEN IN GENERAL/ OF  
CHILDBEARING  
POTENTIAL/PREGNANT WOMEN**

Division of Clinical Leadership in Collaboration with the  
Division of Substance Abuse Services

## **Women's Issues**

### **Women in General/Of Childbearing Potential**

Over the years, research on how gender affects substance use and related problems has established distinct differences between women and men in several important areas. Women often drink alcohol less frequently, consume less alcohol than men when they drink, and are less likely to develop alcohol-related problems than men. There have been similar findings distinguishing women and men in their use of illicit drugs and development of drug-related problems. On the other hand, when women develop problems with substance use, they tend to do it faster than men. Women also tend to report more severe problems and experience more health-related consequences from substance use than men. Furthermore, women's substance-related problems interfere with functioning in more life domains compared to men (Green, 2006). Facts around women and substance use are not favorable. For example:

- Women may respond to substances differently, e.g., they may have more drug cravings and be more likely to relapse after treatment.
- Women use substances differently than men, such as using smaller amounts of certain drugs for less time before they become addicted.
- It appears that women who use drugs may also experience more physical effects on their blood vessels and heart.
- Sex hormones may make women more sensitive than men to the effects of some drugs.
- It appears women may be more likely to go to the emergency room or die from overdose or other effects of certain substances.
- Women who are victims of domestic violence are at increased risk of substance use.
- Loss of child custody, divorce, or the death of a partner or child can trigger a woman's substance use and/or other mental health disorders (NIDA, 2015).

Women frequently report that negative affect, stress, and relationships precipitate initial use of substances. Many times, they are introduced to substance use through a significant relationship such as a family member, boyfriend, or close friend. Family of origin characteristics also play a role in women's use of substances, as is exposure to argumentative, chaotic, and violent households or being expected to take on adult responsibilities as a child. Women with substance use disorders (SUDs) are more likely to have partners that have a SUD. The shared drug use with the partner tends to be perceived as a way of connecting to or maintaining the relationship. Being a woman with a marital status of separated, never married, or divorced operates as a risk factor for development of a SUD while being married appears to be a protective factor (SAMHSA, 2013).

Getting women into treatment or retaining them in treatment is often arduous because women are usually the primary caregivers for their children and/or other family members. Moreover, many

women are very fearful that they will lose their partner if they enter treatment, even more so than during treatment. Getting women to own the substance use problem is difficult because they are afraid they will lose custody of their children. They worry that they will be perceived as ‘bad mothers’ if they admit to having a SUD. Of course, these stereotypes and fears compound the woman’s shame and guilt about substance use and substantially interfere with any help-seeking behavior (SAMHSA, 2013).

Cultural issues may also interfere in a woman’s help-seeking behavior. Women for whom English is not their primary language may be concerned about language difficulties. Asian women may have difficulty engaging in mixed gender groups due to the value place upon patriarchal family hierarchy, gender role expectations, and male offspring. African American/black and American Indian women tend to have a general mistrust of treatment services and will likely not engage in treatment (SAMHSA, 2013).

Gender differences in rates of substance use have been consistently observed in the general population and treatment-seeking samples, with men exhibiting significantly higher rates of substance-related problems. Recent epidemiologic surveys, however, have suggested that the gap between men and women has narrowed in recent decades. For instance, surveys from the early 1980s estimated the male/female ratio of alcohol-use disorders as 5:1; more recent surveys report a ratio of approximately 3:1. Several studies have also indicated that rates of nonmedical prescription drug use are higher among women than men, particularly for narcotic pain relievers and tranquilizers (Greenfield, Back, Lawson, & Brady, 2010).

Among women of childbearing potential, 20 percent of between the ages of 15 and 17 used illicit substances in the past month. In fact, the rates of alcohol consumption by women of childbearing potential are approaching those of men (Chang, 2014). Thus, it is imperative that we have conversations with women about substance use, especially women of childbearing potential. Experts say all women of childbearing potential should be screened periodically for substance use, including alcohol and tobacco use, in addition to use of licit and illicit substances (Wong, Ordean, & Kahan, 2011; WHO, 2014). The American Medical Association (AMA) has endorsed universal screening and health services researchers found that treatment of women for substance use/misuse saves \$7 for every dollar spent (ACOG, 2008). SBIRT screening procedures, as discussed in the *Prevention/Early Intervention* module, is a quick and easy way to proceed with the screening process. This screening will assist in identifying women of childbearing potential who are using substances at risky levels and allow for the provision of an intervention plan (SAMHSA/HRSA/CIHS, 2013).

Because of the specific needs of women, in particular those of childbearing potential, treatment services must be tailored to their needs and address the unique hardships they often encounter in engaging treatment. Promising practices include comprehensive and integrated clinical and community services that, under ideal circumstances, would be delivered at a one-stop location. Hence, the following services need to be available for women: medical services, health promotion, psychoeducation, gender-specific needs, cultural/language needs, life skills, family/child-related services, comprehensive case management, mental health services, disability services, and staff/program development (SAMHSA, 2013).

## Pregnant Women

Pregnancy is a significant concern in treating women of childbearing potential who have a SUD (SAMHSA, 2013). Maybe the pregnancy was planned; maybe it was not. Nonetheless, pregnancy can be a very stressful time for the mother and her unborn child. Expectant mothers are encouraged to do all they can to keep themselves and the developing fetus as healthy as possible throughout the pregnancy. Hence, there is much to think about—what to eat, how much sleep is needed, etc., as well as much to remember to do to ensure the child’s well-being is met. Everything that the

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The woman who is pregnant must watch everything she puts into her body (American Pregnancy Association, 2014).

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expectant mother eats, drinks, takes, or injects will affect the fetus (NIH/NIAAA/NOFAS, 2012). Similarly, everything that the expectant mother fails to do well such as get the required amount of sleep, keep prenatal appointments, etc., will affect the fetus.

The woman who is pregnant must watch everything she puts into her body (American Pregnancy Association, 2014). Specifically pregnant moms should abstain from any substance use, including alcohol, during pregnancy (NIH/NIAAA/NOFAS, 2012). Even if a previous pregnancy involved substance use and the newborn was healthy, the pregnant mom should not push her luck. Each pregnancy is different and this time the substance use could result in a newborn with serious problems (NIH/NIAAA/NOFAS, 2012).

Most often, drug use does not begin during pregnancy. Women enter pregnancy already using or dependent on drugs (Prasad, 2014). It has been reported that approximately 50 percent of women takes at least one medication during pregnancy (mothertobaby.org, 2015). Many of those medications are for preexisting and chronic conditions such as autoimmune disease or asthma and may need to be taken continually through the pregnancy or while breastfeeding (mothertobaby.org, 2014). Moreover, research shows that women between the ages of 18 and 29 are at highest risk for developing addictive behaviors. These data are especially telling because the ages of greatest risk fall during the peak reproductive years. A study at two large hospital-based, inner-city, primary care prenatal clinics reported screening results related to their use of alcohol, cigarettes, illicit drugs, and other related emotional health problems. Nearly 50 percent (around 1,300) had a history of substance use and slightly more than 10 percent indicated current use. Those who used substances tended to be in their mid-twenties, with three as the average number of prior pregnancies. Educational level was fairly evenly spread, though only about 30 percent reported education or training beyond high school (Howell, Shao, & Yonkers, 2010).

Compared to other women of childbearing potential, research suggests that pregnant women tend to use alcohol and other substances to a lesser degree. However, pregnant women often use substances in combination (BSAS, 2011). Over the last few years, substance use during pregnancy has become a major public health concern in the United States, which makes pregnancy a very strategic time to address maternal substance use (Forray, 2016). The American College of Obstetricians and Gynecologists [ACOG] (2011) has recommended that all pregnant women be asked about alcohol and substance use. Moreover, every effort should be made to encourage pregnant women to receive prenatal care, particularly if they are users of alcohol and/or other substances. Babies born to women who have received no prenatal care and are users of illicit substances are at highest risk of being premature and low birthweight (El-Mohandes, Herman, El-Khorazaty, Katta, White, &

Grylack, 2003). Yet these risks decrease substantially as mothers move toward receipt of an adequate level of prenatal care (El-Mohandes et al., 2003; Racine, Joyce, & Anderson, 1993). Of course, the least amount of risk is associated with not using substances during pregnancy in conjunction with obtaining adequate prenatal care (El-Mohandes et al., 2003).

Women who use and/or misuse substances are at higher risk of depression during pregnancy and at increased risk of violence during the postpartum period (BSAS, 2011.) However, substance use and/or misuse during pregnancy frequently remains under-diagnosed or undiagnosed (Keegan, Parva, Finnegan, Gerson, & Belden, 2010). While many pregnant women that use substances do not seek prenatal care, they may seek help with their addiction, especially opioid addiction, through replacement therapy

involving methadone or similar medications.

Sometimes women on certain opioid replacement medication who have

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Many women who use/misuse substances during pregnancy are polydrug users (Forray, 2016; Nelson, 2013).

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become pregnant have been encouraged to remain on the medication to avoid miscarriage. It should further be noted that many women who use/misuse substances during pregnancy are polydrug users, combining methadone and other narcotics, a fact that may not be known to the health care professional until delivery of the infant. This fact creates many challenges for health care personnel (Forray, 2016; Nelson, 2013).

Use of multiple drugs is particularly dangerous to fetal development. One drug can unpredictably and seriously change the bioavailability (rate at which the drug enters the blood stream), concentration, and net effect of any other drugs. Alternately, the combination of drugs can possibly form a metabolite more toxic than any of the parent compounds. These changes can be created by over-the-counter medications as well as licit and illicit drugs in use. For example, aspirin, Tagamet, and Zantac—common over-the-counter medications—interact with alcohol metabolism leading to a higher level of blood alcohol concentration (BAC). The BAC levels for a given dose of alcohol are known and predictable. BAC levels for any added drugs, on the other hand, affect alcohol metabolism in an unpredictable manner. For example, studies involving the combination of alcohol and cocaine have shown the interaction to be more harmful than the use of either drug independently. The combination results in the formation of a highly toxic metabolite cocaethylene. Surviving infants of mothers who co-used/misused alcohol and cocaine have shown serious neurobehavioral deficits (Chen & Maier, 2011).

Women who are pregnant might use and/or misuse prescription medications and the United States Food and Drug Administration (FDA) has beefed up its labeling requirements. The final rule requires that prescription drugs and biological products include more detailed labeling about their risks during pregnancy and breastfeeding. Pharmaceutical companies are further required to ensure

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New labels on prescription drugs and biological products include more detailed information about their risks during pregnancy and breastfeeding (mothertobaby, 2014).

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labels detail risk information about the medications, along with relevant research specific to pregnancy and breastfeeding. In addition, the new labels will have a dedicated section on the impact of a drug on breast milk and the medication's potential impact on fertility, birth control and relevant pregnancy registry information (FDA,

2014a, 2014b; Gaffney, 2014; mothertobaby, 2014). This new labeling went into effect on June 30,



2015 (FDA, 2014a). The Organization of Teratology Information Specialists (OTIS) is one of a number of organizations that will assist health care providers and the general public in understanding the new labels (mothertobaby, 2014).

## Screening

Often providers of prenatal care hesitate to implement screening procedures because they assume urine toxicologies to be the most appropriate screening methodology. However, there are other screening tools that can be effective in exploring substance use by pregnant women. Moreover, urine toxicologies are limited in the information they can provide about alcohol use and further limit identification of illegal drug use if use occurred within 48 hours of testing. The 4P's Plus screen broadens detectability and provides an opportunity for early intervention for the much larger group of women who have risky pregnancies due to relatively small amounts of substance use (Chasnoff et al., 2005). It incorporates five questions specifically designed to quickly identify whether pregnant women need follow-up monitoring or in-depth assessment. The screen takes less than a minute and can easily be integrated into the initial prenatal visit and used for follow-up screening throughout the pregnancy. (The tool can also be used to identify women with risky drinking patterns before they learn their pregnancy.) If the screen is positive but the assessment is negative (i.e., the woman has stopped drinking now that she knows she is pregnant), she can receive an appropriate intervention, education, and/or information with a strong prevention message along with cautions about the impact of even low levels of alcohol use during pregnancy. Brief intervention strategies have been integrated into the screening process since 2000. This package is proprietary. The screener itself is available for purchase from NTI Upstream at <http://www.ntiupstream.com/4pspricing>.

The Institute of Health and Recovery's (IHR's) 5 P's Behavioral Risk Screening Tool, was specifically designed for pregnant women. Based on Dr. Hope Ewing's 4 P's instrument, the tool is in the public domain and includes questions about peers and smoking. The screener also has a trauma focus, including questions about emotional health and violence. A positive screen involves a single positive answer to PARENTS, PARTNER, or PAST use, despite negative responses that may be provided to the PRESENT and PEERS questions. The IHR 5 P's Behavioral Risk Screening Tool is available in the Screening Tools module of this document in the Appendices, along with other screening tools. Clinicians are instructed to ask all 5 P questions to better assess risk, motivation to change, and relational impacts of abstinence from substance use during pregnancy (Watson, 2010). Caring for the pregnant woman affected by substance use should further include prenatal screening and monitoring for sexually transmitted diseases (STDs) at the initial visit and at week 36, along with appropriate treatment as necessary (Bhuvanewar et al., 2008).

## Alcohol Use during Pregnancy

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All advisories warn against (alcohol) use in any amount by pregnant women (e.g., CDC, 2005)

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It has only been since the second half of the 20<sup>th</sup> century that the negative consequences of alcohol use during pregnancy have been known (Kvigne, Leonardson, Borzelleca, & Welty, 2008; Warren,

Hewitt, & Thomas, 2011). In the late 19<sup>th</sup> century, physicians prescribed alcohol to reduce morning sickness and the difficulties of childbirth for pregnant women. By the 1940s, it was believed that alcohol use during pregnancy was not harmful to the fetus. Alcohol has also been used by physicians to delay the onset of labor (Kvigne et al., 2008). In fact, the concept of FAS did not exist before 1973 (Golden & Finkel, 2005). However, the detrimental effects of alcohol use during pregnancy are now known and all advisories warn against use in any amount by pregnant women (CDC, 2005; Ismail et al., 2010).

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No amount of alcohol is safe, especially for the developing fetus (Ismail, Buckley, Budacki, Jabbar, & Gallicano, 2010, e.g.).

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Health care experts advise that no amount of alcohol is safe, especially for the developing fetus (Ismail, Buckley, Budacki, Jabbar, & Gallicano, 2010; NIH/NIAAA, 2015). Moreover, there is no formula for

determining which alcohol-exposed newborns will develop a fetal alcohol spectrum disorder (FASD) (Woods, Greenspan, & Agharkar, 2011). This means that any woman who is sexually active, not using effective birth control, and who consumes alcohol is at potential risk for having a child with FASD (Ismail et al., 2010; WHO, 2014). (FASD is discussed in greater detail in its own module of these guidelines.) Research has also shown that newborns exposed primarily to alcohol in utero demonstrated significant risk of being born of low birth weight, compared to newborns exposed to other types of substances (Irner, Teasdale, Nielsen, Vedal, & Olofsson, 2012). ***Therefore the best preventive strategy is complete abstinence from alcohol by any woman even thinking about the possibility of becoming pregnant*** (Woods et al., 2011).

Nevertheless, some reports indicate between 15 and 25 percent of pregnant women continue to consume alcohol monthly.

Moreover, five to ten of 1,000 pregnant women consume, on average, at least seven drinks weekly.

In addition to the damaging effects

alcohol consumption can have on the

developing brain of the fetus, research has found that alcohol consumption during pregnancy can also increase the risk of infection in newborns (about.com, 2013).

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The best preventive strategy is complete abstinence from alcohol by any woman even thinking about the possibility of becoming pregnant (Woods et al., 2011).

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In general, binge drinking with periods of abstinence mixed with heavy acute drinking results in greater health implications than continuous moderate drinking (Nuñez, Roussotte, & Sowell, 2011; Woods et al., 2011). (Heavy drinking involves at least five drinks on the same occasion on each of five or more days in the past 30 days while moderate drinking is up to one drink per day for women [NIAAA, n.d.]). Older women (in their 30s and 40s) may be more likely to drink during pregnancy (Wilsnack, Wilsnack, & Kantor, 2013).

An eight-state study by Ethen and colleagues identified binge drinking prior to pregnancy as a predictor of drinking and/or binge drinking during pregnancy. Moreover, drinking and/or binge drinking was more prevalent among White, non-Hispanic women whose pregnancy was not planned and who also smoked during pregnancy (Wilsnack et al., 2013).

One extensive review of studies has reported that being African American and American Indian/Alaska Native, a smoker, and of low socioeconomic status (SES) were common



characteristics of women giving birth to a child with fetal alcohol syndrome (FAS). Additional studies have identified more common factors, including being unmarried, under psychological stress, having mental health disorders, having a history of sexual or physical abuse, and having a history of current or previous illicit drug use (CDC/NCBDDD, 2004). (Further discussion of the impact of alcohol use on a prenatally exposed fetus can be found in the module on *Fetal Alcohol Disorder Syndrome* in this document.)

In many instances, it is during a woman's use and/or misuse of alcohol that conception occurs. Moreover, many women continue drinking casually in their first trimester, the time when fetal organ systems are beginning to develop (Keegan et al., 2010). Other realities are the fact that more than 50 percent of pregnancies in the United States are not planned and many women are not aware of their pregnancy for up to four to six weeks (CDC, 2014). However, women should abstain from any alcohol consumption during pregnancy because of the possible risks to the fetus that will be lifelong (CDC, 2005; Ismail et al., 2010). If drinking and pregnant, the woman should stop immediately. *It is never too late to stop* (CDC, 2014).

Women of color, especially African American women, are less likely to drink during their first pregnancy than their White counterparts. Other factors linked to drinking behaviors in pregnant, first-time mothers include having attended some college, feeling pushed around, delayed prenatal care, and having no feeding plan for the baby (O'Brien, 2012).

**Maternal alcoholism is one of the most preventable causes of fetal neurodevelopmental disorders (ACOG, 2008).**

Alcohol use/consumption levels in advance of pregnancy have shown to be a strong predictor of use/consumption

during pregnancy (Floyd, Weber, Denny, & O'Connor, 2009). Additionally, there is still concern that identification and assessment of alcohol use by women does not occur routinely in primary care settings (Clarren & Salmon, 2010). Yet maternal alcoholism is one of the most preventable causes of fetal neurodevelopmental disorders (ACOG, 2008).

Alcohol exposure during pregnancy is highly associated with insecure attachments between newborns and mothers. Exposure may further impact school performance, especially mathematics. Exposure to alcohol in utero seems to affect academic achievement even after controlling for intellectual ability (i.e.,

IQ). A study by O'Connor and colleagues observed higher levels of attachment security and better coping skills when frustrated for children exposed to alcohol in utero and their mothers

**Prevention strategies implemented in advance of conception provide the greatest opportunities for healthy pregnancy outcomes (Floyd, Weber, Denny, & O'Connor, 2009).**

were supportive emotionally. The former group was compared to exposed and unexposed children with unsupportive mothers (NAIARC, 2012).

Prevention strategies implemented in advance of conception provide the greatest opportunities for healthy pregnancy outcomes for women at risk of hazardous alcohol use. Early prenatal care is often

too late for many women and newborns because half of the pregnancies are unplanned. This means that substance use during pregnancy has already occurred. Hence, evidence-based interventions should be implemented before conception. Alcohol-exposed pregnancies can best be reduced by providing brief behavioral interventions and counseling regarding effective contraceptive options when not planning a pregnancy (Floyd et al., 2009).

Three medications have been approved by the United States Food and Drug Administration (FDA) in the treatment of alcohol use disorders (AUDs): disulfiram, acamprosate, and naltrexone (oral and extended-release injectable), all of which are discussed more extensively in the Medication – Assisted Treatment subsection of the *Evidence-Based Treatments* module. Counseling and other supports are part of the medication-assisted treatment (MAT) package (Douaihy et al., 2013; SAMHSA/CSAT, 2009).

## Cocaine Use during Pregnancy

Cocaine, referred to as the “wonder drug” in its early years of appeal in the United States, was originally freely available in saloons, from mail-order vendors, and even in grocery stores. It was often included in soda pop and some wines before its ill effects were known. President William Taft identified cocaine as “Public Enemy No. 1” and Congress, in 1914, passed the Harrison Act, tightly regulating the distribution and sale of the drug. Its appeal declined dramatically by the late 1950’s, but soon reappeared in the 1960’s (Das, 1993).

Cocaine is a powerful stimulant of the central nervous system. Recreational use is typically by injection, inhalation, or through smoking the cocaine derivative “crack”. As true for alcohol consumption during pregnancy, researchers do not know how much cocaine it takes to cause birth defects and/or other adverse outcomes for an exposed fetus. Hence, it is recommended that any amount or form of cocaine be avoided during pregnancy (OTIS, 2014a).

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**It is recommended that any amount or form of cocaine use be avoided during pregnancy (OTIS, 2014a).**

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A majority of mothers who use cocaine during pregnancy additionally use other substances such as marijuana, cigarettes, and alcohol (Eiden, Granger, Schuetze, & Veira,

2011). Spontaneous abortion can occur if cocaine is used during the early months of pregnancy. The incidence of stillbirth for pregnant mothers that used/misused cocaine was elevated eight percent about the expected level when compared to the general population. Preterm rupture of membranes, preterm labor, and preterm delivery are also associated with cocaine use during pregnancy. Further, cocaine use curbs the appetite of the pregnant woman, thereby contributing to poor maternal and fetal nutrition (Keegan et al., 2010).

There are no specific verbal screening instruments for illicit substance use in pregnancy as exist for alcohol use. Neither the CAGE-AID nor the Drug Abuse Screening Test (DAST) have been tested on pregnant women. Therefore, open-ended, nonjudgmental questions about pre-pregnancy substance use at early evaluations and at follow-up to positive screens have been proposed as possibly useful tools. In particular, screening for cocaine use should target “any use” rather than Diagnostic Statistical Manual-5 (DSM-5) criteria because its use by pregnant women is typically occasional and recreational. Biological screening for cocaine use generally involves urine toxicology

that detects the metabolite benzoylecgonine up to 72 hours following use. Some researchers have noted the metabolites in urine up to two weeks following use, depending on the sensitivity of the screening. Serum toxicology, as usually conducted routinely at prenatal visits, should include substances of use/misuse. The metabolites tend to show up as long as eight hours following cocaine use (Bhuvanewar, Chang, Epstein, & Stern, (2008).

The most commonly cited adverse effect of cocaine use during pregnancy is placental abruption. Other negative effects include preterm labor, preterm delivery, premature rupture of membranes, and maternal seizures. Cocaine use frequently results in uterine contractions as well. Many of the complications associated with cocaine use can be assessed by ultrasound at 32 weeks of gestation. Serial ultrasounds conducted on a monthly basis can be used earlier to assess fetal well-being and growth, along with placental integrity. These ultrasounds can also be used in surveillance of adverse effects of other drugs of use/misuse in pregnancy. Other maternal complications may be due to poor prenatal and medical care adherence. (The craving for the next “dose” is particularly pronounced for users of crack cocaine because its first dose is at least 10 times the amount of cocaine present in one “line.) Cocaine users may further exhibit more migraine headaches during pregnancy. Cocaine-induced vasculopathy may lead to increased risk of HIV and other infectious agents by way of vertical transmission from mother to fetus (Bhuvanewar et al., (2008).

A 2013 study by Lewis et al. investigated language outcomes for children exposed prenatally to cocaine through 12 years of age. They were compared on language subtests, including syntax and phonological processing to children who were not exposed to cocaine during pregnancy. The results showed that there were small effects on language and phonological processing scores. These results are especially informative since phonological processing skills are significantly related to the reading outcomes of letter-word identification, reading fluency, and reading comprehension, skills that are associated with later literacy skills.

Medication-assisted treatments (e.g., modafinil, propranolol, disulfiram) that have been approved for use when individuals are dependent upon other substances are not the standard of care for cocaine addiction, despite demonstrations of their ability to reduce cravings for cocaine. Treatment with those medications, however, is not firmly contraindicated in pregnancy. In fact, all are designated as category C, so the risks and benefits must be weighed for each pregnant woman independently prior to treatment. Though the medications have been tested on animals, there are signs of teratogenicity, i.e., the property of being able to produce birth defects (Bhuvanewar et al., 2008).

## **Marijuana Use during Pregnancy**

For an overwhelming majority of the states, the use of marijuana for recreational purposes is illegal. The passage of the Comprehensive Drug Abuse Prevention and Control Act of 1970 classified the drug as Schedule I on the Federal Controlled Substance Schedule. Schedule I drugs are not considered legitimate for medical use. Further, there is evidence that its use in excess by some persons can lead to marked impairment in occupational and/or social functioning (OTIS, 2015).

Marijuana contains about 400 different chemicals and some marijuana cigarettes may contain pesticides and/or other drugs. Moreover, some women who use marijuana may also use tobacco, alcohol, and/or other drugs at the same time. Women who use the drug during their pregnancy may also have other factors that result in pregnancy complications, such as inadequate or lack of prenatal care. Hence, these issues make it difficult to accurately study marijuana use during

pregnancy and lead to variable results across studies (OTIS, 2015). Such realities might explain why data on the gestational length for pregnant women who use marijuana are contradictory (Keegan et al., 2010).

Nevertheless, pregnant women who are using/abusing marijuana should be counseled about associated risks and encouraged to stop.

Intervention and/or referral to treatment should be offered. It is also recommended that these women have follow-up ultrasounds at 28 and 36 week to confirm adequacy of the growth of the fetus (Keegan et al., 2010).

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**It is best for pregnant women to avoid marijuana use (OTIS, 2015).**

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Without sound studies on different types of marijuana use (e.g., none, light, moderate, or heavy) for women during pregnancy, it is best for pregnant women to avoid the substance at this time (OTIS, 2015).

One of the most prevalent findings from research on prenatal exposure to marijuana is the impact on the child's executive functioning, which affects his/her flexible problem solving, working memory abilities, and attention. Links to subtle increases in externalizing problems, impulsivity, and hyperactivity have also been noted. Some studies have found impairment in the growth and development of the fetus due to marijuana use in pregnancy, with greater impairment the longer the woman uses. There is some evidence that marijuana may interfere with intellectual development and academic achievement in a manner similar to alcohol. Exposure to marijuana prenatally has further been linked to increased levels of depression during childhood, along with earlier initiation and higher levels of marijuana use at 14 years of age (NAIARC, 2012).

DiNieri et al. (2011) studied cannabis-related gene disturbances in the human fetus. Their findings suggested that maternal cannabis use altered developmental regulation of mesolimbic D(2)R in the newborns through epigenetic mechanisms that regulate histone lysine methylation. It is believed that the ensuing reduction of D(2)R will contribute to addiction vulnerability later in life.

Evidence exists showing marijuana can be passed to infants during breastfeeding. It is possible that the substance may also affect the quantity and quality of the breast milk made by the mother. The American Academy of Pediatrics has advised mothers who breastfeed to avoid marijuana use (OTIS, 2015).

## **Tobacco Use during Pregnancy**

### **Cigarettes.**

Cigarette smoke contains more than 4,000 toxins and chemicals including nicotine, tar, lead, carbon monoxide, arsenic, and, at minimum, 40 known cancer-causing agents. A number of these toxins and chemicals cross the placenta and lower the amount of oxygen and nutrients available for the developing fetus. This action can result in a direct harmful effect on the newborn (OTIS, 2014b).

The Centers for Disease Control and Prevention (CDC) reported roughly 17 percent of women who were pregnant and between the ages of 15 and 44 years as regular smokers. Thus, these women were subjecting themselves and their developing fetuses to risks that included complications during pregnancy, premature delivery, low birth weight, stillbirth, and sudden infant death syndrome (SIDS)

(NIDA, 2012).

Studies involving tobacco users have demonstrated a 1.2 to 3.6 relative risk for infertility in the preconception period. Moreover, there is an increased prevalence of smoking among younger pregnant women (less than 20 years of age) and older pregnant women (over the age of 35). Up to 15 percent of all women continue to smoke during their pregnancy. However, tobacco use is linked to more complications during pregnancy. Spontaneous abortion runs 20 to 80 percent higher in women who smoke during pregnancy than in nonsmokers. Fetuses that survive are more likely to be preterm and of low birth weight. On average, newborns exposed to tobacco during pregnancy weigh 200 to 500 grams lighter. Research further suggests that births for these newborns tend to be violent (Keegan, Parva, Finnegan, Gerson, & Belden, 2010; NIDA, 2014). A number of studies have reported a higher risk of ectopic pregnancy for women who smoke cigarettes. This is a very serious complication where the developing fetus grows outside of the uterus, typically in the fallopian tubes (OTIS, 2014b).

Withdrawal symptoms, such as tremors, increased muscle tone (rigid muscles) and irritability have been observed in newborns of mothers who smoked during the last weeks of pregnancy. These neonates also demonstrate a higher risk of asthma, bronchitis, and respiratory infections during their childhood. Smoking during pregnancy has further been linked to sudden infant death syndrome (SIDS) (OTIS, 2014b). It is possible that the newborns that survive infancy may later experience language delays or physical control and coordination problems (NAIARC, 2012). Associations have been found between behavior and learning problems and smoking during pregnancy (OTIS, 2014b).

## Smokeless Tobacco.

A number of women look for a way to stop smoking cigarettes during pregnancy because they know of the problems for the developing fetus. However, some women choose to replace the cigarette with smokeless tobacco. They assume it is safer for the developing fetus. Unfortunately, it is the nicotine and not the mode of delivery that is problematic for newborn (Mann, 2011).

Using snuff during pregnancy can elevate a newborn's risk for brief pauses in breathing during sleep (i.e., sleep apnea) to a greater extent than smoking cigarettes. It is believed that other smokeless tobacco products, as well as nicotine replacement products, may carry the same risks. As a

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Women who are pregnant should use a cold turkey approach to quit using tobacco products (Mann, 2011).

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consequence, a number of health care professionals are asking women who are pregnant to implement a cold turkey approach to quit using tobacco products (Mann, 2011).

A study conducted in Sweden examined sleep apnea in newborns whose mothers used snuff during pregnancy, compared to those who did not use any tobacco products. The snuff used by the mothers contained nicotine, though such is not true of all types. The researchers found that the newborns of mothers who used snuff during pregnancy were two times as likely to have apnea, compared to newborns of mothers who did not use tobacco products. Moreover, it was observed that the risk was higher among snuff users than smokers. The study involved nearly 7,600 women who reported using snuff during pregnancy and close to 500 women who reported using both snuff



and smoking cigarettes (Mann, 2011).

## **Treatment Summary.**

Pharmacological treatments have been considered a mainstay for cessation of cigarette smoking. First-line therapies, as recommended by the FDA because of their evidence of effectiveness consist of nicotine replacement therapies (NRT), bupropion, and varenicline (Douaihy, Kelly, & Sullivan, 2013). On the whole, findings from studies investigating pharmacological treatments for users of smokeless tobacco have not been as promising as desired (Ebbert & Fagerstrom, 2012). Behavioral treatments can be used in conjunction with medication or alone. They incorporate a variety of methods to assist users of tobacco products to quit, ranging from self-help materials to individual cognitive-behavioral therapy. Typically these interventions teach persons to recognize high-risk tobacco-using situations, develop new coping strategies, manage stress, improve problem solving skills, and increase social support (NIDA, 2012).

## **Opioid Use during Pregnancy**

In the nineteenth century, pain relievers such as morphine and heroin were deemed as helpful in everyday life. However, people were not initially aware of the adverse effects associated with these and similar substances, especially the abuse potential (Musto, 1991). Over the past several decades, however, flexibility in laws governing the prescribing of opioids for the treatment of chronic non-cancer pain is said to cause the dramatic increases in opioid use. Moreover, opioid analgesics are now responsible for more deaths than the number of deaths from heroin and cocaine combined or from both motor vehicle crashes and suicide (Manchikanti et al., 2012). Some recent studies have reported nearly 22 percent of pregnant women on Medicaid and 14 percent of pregnant women with private health insurance filled a prescription for opioids during pregnancy (Government Accountability Office [GAO], 2015).

The ideal time to intervene and prevent a pregnancy in which the baby is exposed to opioids is during the preconception period. Education and awareness in advance of pregnancy is critical. Besides having conversations about the risks and benefits of exposing infants to opioids in utero, prescribing clinicians should also review a state's prescription drug monitoring program to assist in assessing the pregnant woman's history of exposure to prescription opioids (astho, 2014). Nevertheless, screening is highly recommended in early pregnancy as well (ACOG, 2014; Wong et al., 2011). Many women are unaware of their pregnancy for four to six weeks (CDC, 2014).

Opioid use in pregnancy can result in major problems for mother and her newborn (ACOG, 2012; WHO, 2014). Illicit use of opiates (e.g., heroin) can cause the pregnant woman to engage in risky and/or unhealthy activities, such as theft, prostitution, and violence, to support herself and/or her addiction. These activities, in turn, expose the woman to legal consequences, including loss of child custody, incarceration, or criminal proceedings; becoming a victim of violence; and sexually transmitted infections (ACOG, 2012). The newborns of these mothers typically experience withdrawal symptoms referred to as neonatal abstinence syndrome (NAS). NAS can also occur in newborns of mothers receiving medication-assisted treatment (MAT) in the form of methadone and/or buprenorphine for their opioid addiction (Wong et al., 2011). All newborns exposed to opioids should be monitored and treated for NAS if needed (ACOG, 2012). (NAS is discussed in greater detail in its own module in this tool guide.)

Similar to the biological method of screening for cocaine use, the urine toxicology screen is used to confirm opioid use during pregnancy. Urine screening is efficient and often the most rapid tool available, especially following findings on the physical examination (e.g., track marks) or patient self report. Methadone may be detected in urine for as long as two weeks after use. Heroin remains detectable for up to 72 hours following use. The fentanyl metabolite, norfentanyl, can be detected for a longer period of time than methadone (Bhuvaneshwar et al., 2008). (Some studies have detected norfentanyl for up to 96 hours [See Silverstein, Rieders, McMullin, Schulman, & Zahl, 1993, e.g.]). However, similar to methadone, it may not be part of the “drugs of use/misuse” urine toxicology screen in all facilities. Tests involving neonatal meconium are not yet widely available despite being shown to have at least equivalent and often greater sensitivity for maternal opioid use, when compared to urine toxicology. Though not validated in screening for opioid use, the DAST is still a widely used screening tool for opioid use in pregnancy (Bhuvaneshwar et al., 2008).

A seminal study of the reproductive health of women dependent on opioids by Armstrong, Kennedy, Kline, & Tunstall (1999) revealed the high rate at which these women become pregnant compared to women in the general population. Results indicated 54 percent of women with opioid dependence reported having at least four pregnancies in their lifetime compared to 14 percent of a nationally representative sample of women (Heil et al., 2011).

Heil et al. (2011) further studied estimates of the prevalence of unintended pregnancy for its three subtypes: mistimed pregnancy, unwanted pregnancy, and ambivalent pregnancy. Pregnancy intention of current pregnancy was measured by the question “When did you intend to become pregnant?” Response options consisted of “sooner”, “now”, “later”, “never”, and “don’t know/unsure”. “Sooner” and “now” responses classified the pregnancies as intended. “Later” responses classified the pregnancies as mistimed. Responses of “never” classified pregnancies as unwanted while “don’t know/unsure” responses resulted in an ambivalent pregnancies classification. Nearly 1,000 women with opioid dependence were included in the study.

Results indicated that nearly nine of every 10 pregnancies were unintended. This finding, thus, supported the need to develop interventions to address the extremely high rate of unintended pregnancies among women dependent on opioids (Heil et al., 2011). Similar results have been found in our state.

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**Voluntary, reversible long-acting contraceptives are being promoted for women of childbearing potential, including those with opioid dependence (Dreyzehner, 2015; Warren & Luskin, 2012).**

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The Pregnancy Risk Assessment Measurement System (PRAMS) data from 2009 showed that 86 percent of pregnant women that use opioids have unintended pregnancies compared to 50 percent of the general population of pregnant women (Dreyzehner, 2015).

Tennessee Department of Health (TDH) officials have recommended that use of voluntary, reversible long-acting contraceptives (VRLACs) be promoted for women of childbearing potential, including those with opioid dependence. (See Dreyzehner (2015) and Warren & Luskin (2012). Included among the VRLACs are intrauterine devices and subdermal implants. These strategies are much aligned with the recommendation of Heil et al. (2011) to promote interventions to address the extremely high rate of unintended pregnancies among women dependent on opioids.



Skin-to-skin contact between mother and newborn should be actively encouraged unless the new mom is unable to respond to the newborn's needs. Such contact is important regardless of the feeding choice (WHO, 2014).

## Prescription Opioids and Pregnancy.

Data for 1999 to 2009 show there has been a 33 percent increase in nonmedical use of prescription opioid medications among pregnant women. This means that more women are using narcotic pain

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There has been a 33 percent increase in nonmedical use of prescription opioid medications among pregnant women (astho, 2014, e.g.).

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relievers in one or more of the following ways during pregnancy: without a prescription, for the experience or feeling the drug provides, or in a way other than as medication was prescribed (astho, 2014; Desai, Hernandez-Diaz, Bateman, & Huybrechts, 2014).

The most commonly used prescription medications during pregnancy are codeine (as found with Tylenol), fentanyl (Duragesic), hydrocodone (as Locet, Lortab, or Vicodin), hydromorphone (Dilaudid), morphine (Kadian or Avinza, MSIT, or MSContin), oxycodone (OxyContin or Percodan, Percocet), oxymorphone (Opana), and propoxyphene (Darvon or Darvocet) (The Partnership at Drugfree.org, n.d.)

As of March 1, 2014, Tennessee was one of 18 states to consider substance use/misuse during pregnancy to be child abuse under civil child-welfare statutes. In addition, the state is one of 10 that gives priority access in general programs to pregnant women (Guttmacher Institute, 2016; Thigpen & Melton, 2014).

It should also be noted that 50-75 percent of pregnant women dependent on opioids also have a major psychiatric disorder or mood disorder (astho, 2014; Thigpen & Melton, 2014). Among the pregnant women dependent on opioids, those with:

- Anxiety disorders are more likely to adhere to treatment.
- Mood disorders are more likely to test positive for substances while in treatment (astho, 2014).

It has also been reported that these women are heavy smokers and tend to be polydrug users (astho, 2014). Their pregnancies are often fraught with a host of medical problems including an elevated risk for obstetric complications such as stroke, premature birth, and drug withdrawal (NAIARC, 2012).

Older (2010) reported on the success of the MOTHER (i.e., Maternal Opioid Treatment: Human Experimental Research) study. Pregnant women dependent on opioids were followed a minimum of 28 days out from giving birth. The moms were addicted to opioids and rarely used other illegal drugs. Sixteen percent of moms were screened in and consented to participate in the study. These moms were further randomly assigned to either a buprenorphine or methadone treatment group.

The study supported the usefulness and safety of methadone treatments for moms dependent on opioids (Jones et al., 2010). Comparable findings were observed in a more comprehensive review of buprenorphine versus methadone treatment for pregnant mothers. In addition to the MOTHER study, the PROMISE (Pregnancy and Reduction of Opiates: Medication Intervention Safety and Efficacy) study and a second small-scale study by Fischer et al. have been examined. PROMISE was the small-scale, randomized, single site clinical trial that provided pilot data for the MOTHER study (Jones et al., 2012).

In a randomized European study, mothers who received long-acting morphine used less additional street opiates than mothers who received methadone though newborns in both groups were healthy (Kelly, Minty, Madden, Dooley, & Antone, 2011).

Baldacchino, Arbuckle, Petrie, & McCowan (2014) conducted a comprehensive meta-analysis of the consequences of opioid use by moms during pregnancy on the neurodevelopment of infants and children. They observed no significant impairments in cognitive, behavioral, or psychomotor outcomes. Nevertheless, there was a trend toward poorer outcomes for the infants and children that were exposed to opioids during pregnancy than for their non-exposed counterparts.

## Treatment.

The ideal time to intervene and prevent a pregnancy in which the baby is exposed to opioids is during the preconception period. Education and awareness in advance of pregnancy is critical. Besides having conversations about the risks and benefits of exposing infants to opioids in utero, prescribing clinicians should also review a state's prescription drug monitoring program to assist in assessing the pregnant woman's history of exposure to prescription opioids (astho, 2014).

Methadone maintenance treatment (MMT) has been the most widely available treatment for opioid addiction. For pregnant women, MMT is associated with improved adherence to prenatal care, decreased exposure to illicit drugs and other high-risk behaviors, improved neonatal outcomes, and better relapse prevention. The goal is to prevent withdrawal during pregnancy and to the newborn at birth. Despite its effectiveness for pregnant women, methadone works best when applied as part of a comprehensive treatment program involving obstetric care, counseling, and wraparound services (astho, 2014). It should also be mentioned that breast feeding is safe for women in MMT and their infants unless the women are HIV-1 positive, which means they have the human immunodeficiency virus type 1. (**Women who are HIV-1 positive should never breastfeed.**) Prior to initiating MMT, efforts must be taken to determine that the pregnant female is indeed opioid dependent. Methadone must be used with extreme care in pregnant women that have compromised respiratory function (Kreek, Borg, Ducat, & Ray, 2010).

Research suggests that a large proportion of female admissions to MMT programs tend to be childbearing potential. Women in New York City's MMT program in 2007, for example, ranged in age from 18-34 years and constituted 62 percent of all the female admissions. Thus, MMT programs have the opportunity to address contraception and pregnancy planning with these women during intake and throughout their treatment (Kreek, Borg, Ducat, & Ray, 2010). It is not surprising to find that a third of the women who are sexually active report that they do not use contraception (Harding & Ritchie, 2003; Kreek, Borg, Ducat, & Ray, 2010). A CY 2013 report from TennCare indicates that only 15 percent of the women of childbearing potential prescribed narcotics were also prescribed contraceptives. Yet public health experts in the state highly recommend offering voluntary, reversible long-acting contraceptives to this category of women, particularly when they use or have a

dependence on opioids (Dreyzehner, 2015; Warren & Luskin, 2012). As many as 86 percent of women using opioids report unintended pregnancies compared to 50 percent for the general population of women (Dreyzehner, 2015).

In the event of a methadone overdose, an opioid antagonist such as naloxone is recommended. Naloxone only has a 30-minute-half-life, so more than a single dose will be needed (Kreek, Borg, Ducat, & Ray, 2010).

Increasing research on buprenorphine has resulted in greater use of this medication- assisted treatment (MAT) for the pregnant woman and fetus. There is evidence of lower risk of overdose with buprenorphine because of the ceiling effect on respiratory suppression. Subutex, the single-agent buprenorphine formulation without naloxone, continues to be promoted as the preferred medication-assisted treatment for pregnant women with opioid dependence, e.g., see the 2016 SAMHSA Advisory on buprenorphine for OUD. However, Subutex has a higher abuse or diversion risk potential.

Newer research is showing the success of buprenorphine/naloxone with pregnant women. For example, a 2013 study observed unremarkable maternal findings, comparable to what might be found after treatment with the mono-buprenorphine product. Neither were there any significant adverse neonatal outcomes during pregnancy (Deblak, Morrone, O'Grady, & Jones, 2013). Another study of pregnant women on opioids who were treated with the combination buprenorphine product versus methadone demonstrated unremarkable maternal and neonatal outcomes as well. Additionally, neonates exposed to maternal buprenorphine/naloxone had less frequent NAS and shorter overall hospitalization lengths (Wiegand et al., 2015). Despite positive maternal and neonate outcomes, buprenorphine/naloxone has not achieved preferred first-line pharmacotherapy status for pregnant women (e.g., see Berghella, Seligman, & Cleary, 2016).

There are also concerns about the benefits of buprenorphine for pregnant women that have high opiate needs. Nevertheless, it offers a different model of delivery from the highly regulated opioid treatment programs (OTPs). Buprenorphine can be prescribed in an office setting by physicians who have obtained a special SAMHSA waiver for prescribing. Further emerging research has suggested that buprenorphine exposure results in less severe NAS manifestation compared to methadone, which translates into less total morphine for treating withdrawal symptoms, shorter duration of treatment, and shorter hospital stay for the affected newborns. Data on infant and child outcomes in the long term following in utero exposure to buprenorphine are not yet available (astho, 2014). (Further discussion of the impact of opioid addiction on a prenatally exposed fetus can be found in the module on *Neonatal Abstinence Syndrome* found within this document.)

Mothers of the newborns and other family members likely need teaching and support. Mothers, in particular, may need support to deal with feelings of anxiety and/or guilt upon witnessing their newborn's withdrawal symptoms. In some cases, mothers of newborns likely need assistance dealing with distress or abusive or violent confrontations that can occur if partners or relatives communicate blame about her drug dependency. Mothers may also need positive role modeling from healthcare providers on how to recognize and respond appropriately to the newborn's cues, thereby helping to set the tone for mother-infant attachment and healthy interactions (astho, 2014).

## **Acupuncture for Opioid Use during Pregnancy.**

This traditional method of health care with a long history of practice in China and other parts of Asia has been promoted as a supportive component of substance use treatment as well as a technique that can enable job readiness. Several thousand alcohol and drug treatment programs in the United States have added ear acupuncture to their protocol. Based on a 35-year experience at the Lincoln Hospital in Bronx, NY which delivered acupuncture treatments daily as part of its comprehensive substance disorder program, the technique serves to enhance an individual's overall functioning (Smith, 2012).

- As a nonverbal intervention, it aids in reaching resistant users/misusers of substances.
- It reduces agitation and anxiety while facilitating receptive behavior and calm.
- It helps in the development of an inner meditative core in even the most fearful and troubled individuals (Smith, 2012).

Ear acupuncture treatments are generally provided in large groups where group members sit together quietly for about 45 minutes. This process is known as the National Acupuncture Detoxification Association (NADA) protocol. Clinical personnel must be trained to use the protocol and state laws must include this training standard. The ear acupuncture protocol has been tested as a safe and inexpensive substance use treatment and/or adjunct to treatment (Smith, 2012). Dr. Wen developed the procedure, acupuncture combined with electrical stimulation at four body points and two ear points, reported relief of symptoms from opioid withdrawal in individuals with opiate addiction (Lin, Chan, & Chen, 2012).

## **Methamphetamine Use during Pregnancy**

Methamphetamine is sometimes prescribed by a physician, but most often it is used illegally. Also known as “meth”, “speed”, “crank”, and “ice”, methamphetamine can be snorted, smoked, swallowed, inhaled, or injected (Petit, Karila, Chalmin & Lejoyeux, 2012). It works by exciting the brain with chemicals that can make people “feel good”. Methamphetamine acts as a stimulant and causes a fast heart rate, sweating, loss of appetite, hallucinations, paranoia, anxiety, trouble sleeping, and dizziness. Overdoses can lead to death or brain damage and long-term use can result in an array of health problems (OTIS, 2016).

The drug was discovered in Japan in 1919 (Narconon, n.d.). It could be injected but smoking methamphetamine created the same effects as injecting. While anyone who can read a recipe can manufacture it, today's increased abuse is the result of a new wave of extremely potent, high-purity, low-cost meth manufactured by advanced laboratories run by Mexican drug cartels. California is a favorite delivery location for the popular drug (Methamphetamines.com, 2013; Stewart, 2015).

Female users of methamphetamine tend to have high levels of psychiatric symptoms and psychological problems, in general. In addition, many of the women begin using methamphetamine to lose weight. It has been hypothesized that gender roles that stress the thin-ideal body image exacerbate use, especially among White, Pacific Islander, and Native American women (Wright, Schuetter, Fombonne, Stephenson, & Haning III, 2012).

It is extremely difficult to sort out the specific effects of methamphetamine because roughly 80 percent of the women who use the substance also use nicotine and/or alcohol. One study has tried to separate the effects and found that both methamphetamine and alcohol impair the part of the brain responsible for verbal memory and learning and attention. However, it was further observed that methamphetamine had a

negative impact even beyond that of alcohol alone (NAIARC, 2012).

Good, Solt, Acuna, Rotmensch, & Kim (2010) conducted a single site chart review from 2000 to 2006 where pregnant methamphetamine users were compared to the general obstetric population during the same period for various demographic factors and perinatal outcomes.

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**Methamphetamine use during pregnancy is complicated by more morbid neonatal and maternal outcomes when compared with the general obstetric population (Good, Solt, Acuna, Rotmensch, & Kim, 2010).**

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Factors significantly associated with methamphetamine use were preterm delivery, low Apgar scores, cesarean delivery, and neonatal mortality. Maternal demographic characteristics also indicated that these women were more likely to use other abusive substances, be unemployed, and have higher rates of domestic violence and adoption. It should also be noted that exposure to methamphetamine prenatally influences development of the verbal memory system above the effects of prenatal exposure to alcohol. Furthermore, these methamphetamine-exposed babies taxed hospital staff and ultimately burdened the foster care system. In short methamphetamine use during pregnancy is complicated by more morbid neonatal and maternal outcomes when compared with the general obstetric population.

A segment of the Infant Development Environment and Lifestyle (IDEAL) Study characterized methamphetamine usage patterns during pregnancy. Study sites in the United States included Tulsa, OK; Los Angeles, CA; Honolulu, HI; and Des Moines, IA. The researchers found variation in methamphetamine use during pregnancy. Some women consistently used the drug at a high rate throughout their pregnancy; some increased their use during pregnancy; some decreased their use; and some maintained a steady though not high level of use. Of the women showing decreased use during pregnancy, however, they were most likely to replace their diminished methamphetamine intake with alcohol. Thus, this group became polysubstance users during pregnancy, thereby increasing risks for themselves and their newborn (Grotta et al., 2010).

Methamphetamine use by women who are pregnant is not as well studied as use of alcohol, cocaine, and opiates. Moreover, women who use/misuse meth commonly use other drugs such as alcohol and tobacco, thus likely confounding birth outcomes. However, the increased risk of low birth weight and small for gestational age reported for newborns exposed to other substances of use/misuse during pregnancy also manifests in births associated with methamphetamine use (ACOG Committee on Health Care for Underserved Women, 2011; Wright et al, 2012). There is further evidence of increased rates of premature delivery and placental abruption (i.e., the separation of the placental lining from the uterus) (NIDA, 2013). Women that were actively using meth during their pregnancy should not breastfeed due to the inability to predict harmful effects associated with the ingredients used to cook it (ACOG Committee on Health Care for Underserved Women, 2011).

Neonates exposed to methamphetamine during pregnancy typically are being born too early and too small. They are also at risk for life-long breathing, vision, hearing, and learning problems. Some research suggests that methamphetamine can increase the chance for sudden infant death syndrome



(SIDS), even in neonates not born early (OTIS, 2016).

Evidence about whether methamphetamine increases the chance of birth defects is mixed. It is further not known whether prenatal exposure to methamphetamine can cause intellectual or behavioral problems in older children. A few studies have shown that if a mother uses methamphetamine later in her pregnancy, the newborn can show signs of withdrawal at birth. Symptoms include having very floppy or tight muscles, difficulty eating, sleeping too little or too much, and being very jittery. Withdrawal symptoms usually go away within a few weeks, but it is possible that the newborn will be admitted to the special care unit and have longer hospital stays. Some neonates have tremors and too much or too little muscle tone for many months after birth. These symptoms go away on their own in many cases, but these children might benefit from programs such as infant stimulation or physical therapy (OTIS, 2016).

At the time of this writing, there are no pharmacologic treatments that have shown to be effective in curbing methamphetamine use, prolonging abstinence, or counteracting the drug's special effects (ACOG Committee on Health Care for Underserved Women, 2011; NIDA, 2013). Three double-blind placebo-controlled trials using bupropion, naltrexone, and modafinil have shown positive results in reducing methamphetamine or amphetamine use. Two studies employing agonist replacement medications, one with methylphenidate and the other with d-amphetamine, have also shown promise. Continued efforts are being made to develop medications for the treatment of methamphetamine dependence (Karila, 2010).

## **Treatment for Methamphetamine Addiction.**

Pharmacotherapy does not yet exist for treatment for methamphetamine use (ACOG Committee on Health Care for Underserved Women, 2011; Karila et al., 2010; NIDA, 2013; Petit et al., 2012). All treatments at this time are psychosocial and primarily behavioral.

1. First, every woman that reports using methamphetamine should receive counseling and be offered assistance in discontinuing use. Thus clinicians must ask the question(s) about alcohol and substance use.
2. Treatment outcomes are more positive when enrollment into residential care is voluntary.
3. Outpatient treatment, if used, must be very intensive during the first several weeks. This means three to five sessions per week early in the treatment phase and dropping to two to three sessions each week for the next 90 days.
4. Recommended treatment components include cognitive-behavioral therapy (CBT) that incorporates the Matrix model, family education, behavioral therapy, individual counseling, 12-step support, and random substance use testing. (The Matrix model typically runs for 16 weeks.)
5. Contingency management interventions that offer incentives for treatment engagement and abstinence have also shown effectiveness (ACOG Committee on Health Care for Underserved Women, 2011; NIDA, 2013; Petit et al., 2012).
6. Comprehensive prenatal care should be part of the treatment package. This means the women

should receive a nutritional assessment and linked to social support services.

7. Pregnant women using methamphetamine should further be tested for HIV and sexually transmitted infections (ACOG Committee on Health Care for Underserved Women, 2013).

## **Amphetamine Use during Pregnancy**

Amphetamine use during pregnancy is increasing worldwide. Pregnant women that use amphetamines illegally tend to have lower household incomes, be socially deprived, younger, have less formal education, lack private insurance, have little support through a partner or family, less likely to obtain appropriate prenatal care, and be involved in a marginalized lifestyle, e.g., domestic violence situation. Very few studies abound for pregnant mothers legally prescribed amphetamines for conditions such as attention deficit hyperactivity disorder (ADHD) (Oei et al., 2012).

Prenatally, it is important to help the amphetamine user who is pregnant to secure adequate shelter and nutrition, treat any co-occurring psychiatric morbidities, and keep her prenatal care appointments. Research suggests these pregnant moms seek prenatal care less frequently than other known pregnant users of substances (Oei et al., 2012). Since there appears to be no detrimental effect associated with discontinuation of use during pregnancy, every reasonable effort should be undertaken to encourage known users/misusers who are pregnant to stop (Keegan et al., 2010).

## **Sedatives-Hypnotics and Anxiolytics Use during Pregnancy**

Butalbital, the active ingredient in Fiorinal and Fiorocet, is a barbituate that is frequently used in the treatment of migraines which are more common in women. Both medications were Category C on the FDA's Fetal Risk Summary, meaning there were not any controlled studies of their harmful effects on fetuses. However, these medications should only be prescribed to pregnant women if the benefits outweigh the risks (Keegan, Parva, Finnegan, Gerson, & Belden, 2010).

Benzodiazepines, however, were Category D medications, indicative of positive evidence of human fetal risk based on adverse reaction data from marketing or investigational studies or experience in humans (Sanz & De las Cuevas, 2006). Again, the risk must be weighed against the medical condition for which the pregnant woman is being treated. Physicians should be on high alert if women are abusing benzodiazepines during pregnancy. There tends to be use/misuse of other substances in these cases (Keegan et al., 2010).

Alprazolam, a benzodiazepine commonly used in the treatment of anxiety, is contraindicated in pregnant women. The drug maker further warns that alprazolam could cause harm to the unborn baby and/or addiction or withdrawal symptoms at birth (Alprazolam, 2012; Sanz & De las Cuevas, 2006).

A rehabilitation program should be considered for women who are heavy users of sedative-hypnotics during pregnancy. An evaluation by a psychiatrist or migraine specialist might also be helpful as he or she may be able to help the woman transition away from the addictive medications. Newborns exposed to benzodiazepines or barbituates during pregnancy are further likely to experience significant withdrawal symptoms (Keegan et al., 2010).



## Antiepileptic Drug (AEDs) Use during Pregnancy

No antiepileptic drug has proven safe in pregnancy in terms of teratogenesis at this time. Therefore, treatment for pregnant women must be individualized (Wilner, 2010).

Women with epilepsy who are considering pregnancy or currently pregnant should be carefully reassessed. Antiepileptic medication may no longer be necessary for women with persistent nonepileptic events, such as syncope or migraine that were misdiagnosed as epilepsy. A similar non-need might also be considered for women with ill-defined “spells” that have since gone away. Moreover, there are women that may have epilepsy that is sufficiently controlled (i.e., seizures have not been evident for several years) so that a trial off medication before conception could be warranted (Wilner, 2010).

Use of antiepileptic drugs (AEDs) by pregnant women has been linked to immediate withdrawal effects of the newborn, as well as to long-term neurologic dysfunctions (Sanz & Delas Cuevas, 2006). More current evidence suggests that women taking antiepileptic medication, in particular valproate, during the first trimester are at highest risk for congenital malformations. Phenobarbital and phenytoin also result in adverse cognitive outcomes for the children. Newer antiepileptic medications such as levetiracetam may not be safer. Much more research on these newer medications in terms of teratogenesis is needed (Wilner, 2010).

In short, use of antiepileptic medications with pregnant women should adhere to the following recommendations:

1. Start by assessing whether the patient really needs antiepileptic treatment.
2. Choose the drug that is well tolerated and controls the seizures (but avoid valproate).
3. Use as few drugs as possible at the lowest effective dose.
4. Regularly monitor drug levels during pregnancy (Wilner, 2010).

## Selective Serotonin Reuptake Inhibitor (SSRI) Use during Pregnancy

Selective serotonin reuptake inhibitors (SSRIs) are frequently used during pregnancy, largely for the treatment of depressive disorders in the mothers. In fact, their use during pregnancy has increased because of the favorable risk to benefit ratio. However, short-term adverse outcomes in the form of a withdrawal syndrome similar to neonatal abstinence syndrome (NAS) have occurred in up to 30 percent of newborns exposed in utero to these medications. Among the short-term effects include signs of both central nervous system depression and excitation, decreased changes in behavioral states, autonomic symptoms, and abnormal sleep organization. These symptoms primarily affect the neonate’s respiratory and gastrointestinal systems. In addition there is some evidence of small head circumference at birth, but cognitive ability does not appear to be impacted (Klinger et al., 2011).

In 2011, the FDA updated its safety announcement on the use of SSRI antidepressants by pregnant women and the potential risk of a rare heart and lung condition known as persistent pulmonary hypertension of the newborn (PPHN). PPHN occurs when a newborn does not adapt to breathing outside the womb and may require intensive care support including a mechanical ventilator to increase their oxygen level. In severe cases, PPHN can result in damage to multiple organs, including the brain, and even death.

The initial advisory was published in July 2006 and based on a single published study. Newer studies evaluating this potential risk have shown conflicting findings, thereby making it unclear whether use of SSRIs during pregnancy can cause PPHN. Hence, the FDA has recommended that health care providers treat depression during pregnancy as clinically appropriate (FDA, 2012).

## **Psychiatric Medication Use during Pregnancy**

Mental illness can bring increased risks and difficulties during and after pregnancy, such as birth complications and a worsening of symptoms (Collingwood, 2010; Sanz & De las Cuevas, 2006). Serious mental illness such as schizophrenia is not as common but about 20 percent of women will experience clinically diagnosable anxiety or depression during pregnancy and the postpartum period (Collingwood, 2010).

Despite the lack of pregnancy safety data for many medications, some researchers have observed as many as 16 percent of women being treated for depression, for example, taking medications with potential for fetal harm. During pregnancy, the treatment plan should be based on the woman's current mental state and medication, as well as previous treatment, history of past mental illness, and family history of mental illness during pregnancy. Considerations should also be given to the woman's pregnancy-related fears, substance use, and support network (Collingwood, 2010). Discontinuing effective psychotropic treatments can worsen the mental health of the mother, causing secondary effects to the unborn child (Sanz & De las Cuevas, 2006). In addition, sudden stoppage of treatment can result in side effects and relapse (Collingwood, 2010).

Pregnancy outcomes for antipsychotic medications vary widely depending on the type of medication. Exposure to low-strength antipsychotics during the first trimester is associated with a small additional risk of congenital anomalies overall (Collingwood, 2010).

Management and treatment are complex and require careful consideration by the psychiatrist of any impact on mother and her fetus, in addition to the possibility of increased risk of obstetric complications and congenital malformations (Sanz & De las Cuevas, 2006). The National Institute of Mental Health (NIMH) affirms that medication decisions should be based on each woman's circumstances and needs. Further, medication selection should be based on available scientific research and prescriptions should be written for the lowest dose possible. Moreover, pregnant women on psychotropic medications should be watched closely throughout their pregnancy as well as after delivery (NIMH, 2012).

## **Substance Use, Pregnancy, and Birth Outcomes: General Summary**

Many substances, if used during pregnancy produce teratogenic effects (e.g., facial and skeletal abnormalities). Such use further adversely affects developing neurological systems, brain organization and fetal growth and/or maturation.

Table 1 below summarizes the potential effects of prenatal exposure to the more commonly used substances on birth outcomes, central nervous system development cognitive function, and behavior. The table should be interpreted in conjunction with the fact that outcomes of newborns exposed to substances *in utero* depend, in part, upon the quality of care received by the mother during pregnancy (Jensen, 2014).

**Table 1. Potential effects of prenatal substance exposure on birth outcomes, central nervous system development, cognitive function, and behavior**

Substance	Birth Effects	Effects on CNS development, cognitive function, and behavior
Nicotine	<ul style="list-style-type: none"> <li>➤ Prematurity</li> <li>➤ Decreased birth weight, height, head circumference</li> <li>➤ Sudden infant death syndrome</li> <li>➤ Increased infant mortality rate</li> </ul>	<ul style="list-style-type: none"> <li>➤ Excitability, hypertonia</li> <li>➤ Conduct disorder, reduced IQ, aggression, impulsivity, ADHD, antisocial behavior</li> </ul>
Marijuana	<ul style="list-style-type: none"> <li>➤ No fetal growth effects</li> <li>➤ No physical abnormalities</li> </ul>	<ul style="list-style-type: none"> <li>➤ Prematurity</li> <li>➤ Decreased birth weight, height, head circumference</li> <li>➤ Intraventricular hemorrhage</li> </ul>
Methamphetamine	<ul style="list-style-type: none"> <li>➤ Decreased birth weight</li> <li>➤ Small for gestational age</li> </ul>	<ul style="list-style-type: none"> <li>➤ Poor movement quality, increased lethargy, lower arousal, increased physiological stress</li> <li>➤ No motor or mental delay</li> </ul>
Cocaine	<ul style="list-style-type: none"> <li>➤ No fetal growth effects</li> <li>➤ No physical abnormalities</li> </ul>	<ul style="list-style-type: none"> <li>➤ Mild withdrawal symptoms; poor autonomic control, particularly of state regulation (the ability to adjust one's level of alertness as required for a task)</li> <li>➤ Executive function impairment, reading and spelling difficulty</li> </ul>
Heroin/Opioids	<ul style="list-style-type: none"> <li>➤ Prematurity</li> <li>➤ Decreased birth weight, height, head circumference</li> <li>➤ Sudden infant death syndrome</li> </ul>	<ul style="list-style-type: none"> <li>➤ NAS, strabismus, less rhythmic swallowing</li> <li>➤ Possible delay in general cognitive function, aggression, anxiety, inattentive/disruptive behavior</li> </ul>

Source: Jensen, 2014

It should be noted that pregnancy can serve as a motivating factor for entry into a treatment

program. Such a program might focus on improving prenatal care, optimizing maternal physical and mental health, and reducing withdrawal symptoms and cravings for substances, as well as behavioral problems (Jensen, 2014).

## Treatment

While it is important to limit exposure to medications during pregnancy because of the potential harm to the developing fetus, untreated chronic illnesses, such as substance dependence, particularly to opioids, are linked to increased mortality and morbidity (Goodwin et al., 2007). Collaborative partnerships are essential to successfully serving pregnant women (BSAS, 2011). Yet, national data suggested almost 85 percent of women who needed substance use treatment during pregnancy and/or following childbirth either did not perceive the need for treatment or failed to receive treatment (Gibbons et al., 2010).

Withdrawal management (i.e., detoxification) during pregnancy is not recommended (Bhuvanewar et al., 2008; SAMHSA/CSAT/DPT, 2015). At least that's the position of the American Congress of Obstetricians and Gynecologists (ACOG) (IRETA, 2014). However, there are other recommendations. One approach allows the pregnant woman to withdraw from MAT and stay in the treatment program, but requires a mid-level practitioner, preferably a physician experienced in addiction medicine, to supervise the withdrawal process with regular fetal assessments, as appropriate, for the gestational age. Some experts specify that withdrawal, if implemented, should not be initiated before 14 weeks or after 32 weeks gestation (Bhuvanewar et al., 2008; SAMHSA/CSAT/DPT, 2015). Other experts recommend waiting until the end of the first trimester, which is very close in time frame to the former recommendation.

Limited data has shown miscarriage rates may be higher in the first trimester so waiting to employ detoxification may improve the fetus' survival chances. Some case reports of detoxification (i.e., withdrawal management) during pregnancy have reflected miscarriages, preterm births, meconium passage, stillbirth, and elevated norepinephrine and epinephrine levels, in addition to unsuccessful relapse rates of 50 percent or higher (Prasad, 2014). A more recent Tennessee study involving more

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A Tennessee study involving more than 300 pregnant women dependent on opioids did not show detoxification to be harmful (Bell, Towers, Hennessy, Heitzman, Smith, & Chattin, 2016).

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than 300 women detoxifying from opiates during pregnancy has shown some promising results. Nearly 75 percent of the women were younger than 30 years of age and 78 percent were multiparous, i.e., had given birth at least twice. **Overall the data did not show detoxification to be harmful to the fetus.** Compared to other

groups in the study, women who were fully detoxified and remained in long-term behavioral health settings had better relapse rates and their newborns had low NAS rates. The researchers acknowledged the need for further research but concluded that intense behavioral health follow-up is necessary for continued success once a woman has been fully detoxified (Bell, Towers, Hennessy, Heitzman, Smith, & Chattin, 2016).

The literature suggests that it is best to adopt a team approach with regard to withdrawal and/or replacement of substances used and/or misused by women during pregnancy. Incorporate a

system-based practice model involving neonatologists, psychiatrists, psychologists, and social workers (Keegan et al., 2010). Nonetheless, the best strategy for ameliorating many of the complications of substance use during pregnancy is prenatal care (Wright et al., 2012).

Maintenance therapy is recommended for pregnant opioid users, unless the maintenance drug is not well tolerated (Outcome is a function of person's social deprivation and the extent to which other substances, legal and/or illegal, are used concomitantly [Soyka, 2013].) Methadone maintenance treatment (MMT) is the most widely available treatment for opioid addiction. For pregnant women, MMT is associated with improved adherence to prenatal care, decreased exposure to illicit drugs and other high-risk behaviors, improved neonatal outcomes, and better relapse prevention. The goal is to prevent withdrawal during pregnancy and to the newborn at birth (astho, 2014). Hence, MMT goals for pregnant women include improved fetal as well as maternal outcomes (Fullerton et al., 2014). Despite its effectiveness for pregnant women, methadone works best when applied as part of a comprehensive treatment program involving obstetric care, counseling, and wraparound services (astho, 2014). It should also be mentioned that breast feeding is safe for women in MMT and their infants unless the women are HIV-1 positive, which means they have the human immunodeficiency virus type 1. (*Women who are HIV-1 positive should never breastfeed* [Kelly et al., 2011; Kreek, Borg, Ducat, & Ray, 2010].) Prior to initiating MMT, efforts must be taken to determine that the pregnant female is indeed opioid dependent. Methadone must be used with extreme care in pregnant women that have compromised respiratory function (Kreek et al., 2010).

Research suggests that a large proportion of female admissions to MMT programs tend to be childbearing potential. Women in New York City's MMT program in 2007, for example, ranged in age from 18-34 years and constituted 62 percent of all the female admissions. Thus, MMT programs have the opportunity to address contraception and pregnancy planning with these women during intake and throughout their treatment (Kreek et al., 2010). It is not surprising to find that a third of the women who are sexually active report that they do not use contraception (Harding & Ritchie, 2003; Kreek et al., 2010).

Increasing research on buprenorphine has resulted in greater use of this medication- assisted treatment (MAT) for the pregnant woman and fetus. There is evidence of lower risk of overdose with buprenorphine because of the ceiling effect on respiratory suppression (astho, 2014). Subutex, the single-agent buprenorphine formulation without naloxone, is preferred for pregnant women (astho, 2014; Federation of State Medical Boards, 2013), but it does have a higher abuse or diversion risk potential. There are also concerns about the benefits of buprenorphine for pregnant women that have high opiate needs. Nevertheless, it offers a different model of delivery from the highly regulated OTPs. Buprenorphine can be prescribed in an office setting by physicians who have obtained a special SAMHSA waiver for prescribing. Further emerging research has suggested that buprenorphine exposure results in less severe NAS manifestation compared to methadone, which translates into less total morphine for treating withdrawal symptoms, shorter duration of treatment, and shorter hospital stay for the affected newborns. Data on infant and child outcomes in the long term following in utero exposure to buprenorphine are not yet available (astho, 2014). Research has suggested that women be switched to buprenorphine monotherapy if they become pregnant because there is insufficient data to support the safety of the buprenorphine/naloxone combination (Soyak, 2013).

Mothers of newborns as well as other family members likely need teaching and support. The mothers, in particular, may need support to deal with feelings of anxiety and/or guilt upon witnessing their newborn's withdrawal

symptoms. In some cases, mothers of newborns may need help dealing with distress or abusive or violent confrontations that can occur if partners or relatives communicate blame about her drug dependency. Mothers may also need positive role modeling from health care providers on how to recognize and respond appropriately to the newborn's cues, thereby helping to set the tone for mother- infant attachment and healthy interactions (astho, 2014). Best practice shows that babies born to women addicted to opioids fared better when the mothers received medication-assisted treatment in the form of buprenorphine or methadone, compared to babies whose mothers received no treatment (NIDA, 2010). Moreover, newer studies involving buprenorphine show the same clinical outcomes as methadone, but a reduction in withdrawal symptoms (e.g., Jones et al., 2012; Lacroix, Hammou, & Montastruc, 2011). NAS severity appears to be a greater function of the use of other drugs rather than the buprenorphine dose. Recent research has shown buprenorphine emerging as first-line treatment for opioid users who are pregnant (Soyka, 2013).

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Mothers of newborns as well as other family members need teaching and support (astho, 2014).

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## Other Treatments

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The best strategy for reducing substance use complications during pregnancy is prenatal care (Wright et al., 2012).

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Since prenatal care is the best strategy for reducing substance use complications during pregnancy, it follows that *harm-reduction programs* should be provided for pregnant women (Wright et al., 2012). Key components of such programs consist of:

- Improvements in nutrition
- Reduction in smoking
- Reduction in substance use including alcohol (Wright et al., 2012)
- Encouragement of breastfeeding, when appropriate (Thigpen & Melton, 2014; Wright et al., 2012)
- Promotion of dental health
- Encouragement of physical activity
- Encouragement of early and continuing prenatal care
- Promotion of social and community support (Wright et al., 2012)



A study of pregnant women in Hawaii who used methamphetamine during pregnancy demonstrated successful maternal and birth outcomes in such a program. There were increased prenatal visits that tended to be associated with better participation in other clinic services, which translated into increased abstinence. The abstinence rates were high despite not mandating an abstinence-only approach. Quality prenatal care involving four visits at minimum were shown to significantly improve birth outcomes. The findings suggest that providing a comprehensive approach to the treatment of women with addiction issues is paramount. All components of a woman's life must be addressed. This harm-reduction program further resulted in relatively low rates of postpartum depression (Wright et al., 2012).

## Managing Relapse

Young and old alike run the risk of returning to substance use and/or at high rates following treatment. Estimates show between 67 percent and 80 percent thirds and four-fifths start using again in the six months after community-or hospital-based treatment (Ramo & Brown, 2008).

Ideally the individual's warning signs should be recognized in advance of any substance use while conducting regular drug screens. Carefully observe and review the person's behavior. For example, has the individual stopped attending sessions regularly? If showing up for scheduled appointments, note the person's clinical presentation at EACH visit. Look for any changes that might be precursors to relapse. Probing carefully will often shed light on patterns of substance use. In the case of detected or admitted substance use, acknowledge it in a nonjudgmental way, neither condoning nor punishing the behavior. Though any substance use is of concern, which substance a person is turning to since treatment is crucial in determining areas for revision in the treatment plan (Ramo & Brown, 2008).

Compared to women in the third trimester of pregnancy, mothers of children under three months of age in the household had much higher rates of past month cigarette use, marijuana use, alcohol use, and binge alcohol use. This finding suggests resumption of substance use among mothers in the three months following childbirth. Thus, there is a need to address use of effective interventions for women to prevent postpartum resumption of substance use and improve their overall health and wellbeing, as well as that of their young infants (SAMHSA/OAS, 2009).

A recent study examined the rates of abstinence in pregnancy and relapse postpartum for nicotine cigarettes, marijuana, cocaine, and alcohol. Self-reports and urine

toxicologies were collected during pregnancy and 24-months following delivery. The researchers observed that 83 percent of women achieved abstinence to at least one substance in pregnancy, with abstaining a more likely outcome for marijuana, cocaine, and alcohol than cigarettes. However, 80 percent of the women who were abstinent in the last month of their pregnancy have relapsed to at least one substance postpartum. Women using cocaine, however, were less likely to relapse after

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**There is a need to address the use of effective interventions for women to prevent postpartum resumption of substance use and improve their overall health and wellbeing, as well as that of their young infants (SAMHSA/OAS, 2009).**

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attaining abstinence compared to women who used marijuana, alcohol, or cigarettes (Forray, Merry, Haiqun, Ruger, & Yonkers, 2015).

## More Contraindications

***It is recommended that Naltrexone and Antabuse® be avoided during pregnancy.***

Naltrexone has the ability to precipitate severe opioid withdrawal in patients taking buprenorphine or methadone, which could be fatal to the fetus. Antabuse® has teratogenic effects which means the developing fetus could develop an intellectual disability and/or some sort of growth deficiency, e.g. (Ramo & Brown, 2008).

## Resources

### Books/Curriculum.

#### *Every Step of the Way (ESW).*

- ✓ *Every Step of the Way (ESW)* is a thin, power-packed book designed for pregnant women. In particular, it has special value for women at risk of using substances during their pregnancy. Rather than focus on the hazards of substance use, it addresses the benefits of a healthy pregnancy. The substance focus of this book is alcohol, primarily because it is the most commonly used substance, even when other substances such as cocaine, heroin, or prescription pain relievers, might be the preferred substance of choice. The message to the women is to avoid any and all substance use during pregnancy.
- ✓ *Every Step of the Way: Parents' Guide* provides a month-by-month approach to what a healthy, developing baby looks like, as well as the risks alcohol (and/or other substances) may pose to the baby. The book is a blend of clinical research and imaginative writing exercises to connect the mother to her baby and foster healthy decision making throughout pregnancy. This guide is sold in a pack of 10.

#### *I Am Concerned... (IAC).*

- ✓ *I Am Concerned...* is a pre-treatment curriculum designed for use in the primary prenatal care setting for pregnant women who need some form of drug treatment, but refuse to get it. It is a brief intervention that focuses on the risks linked to continued substance use. The book contains background information on drug use among women, the brief intervention approach and drug-specific information on alcohol, cocaine, heroin, marijuana, methamphetamines, Oxycontin, PCP, and tobacco.

### Video.

#### *National Organization on Fetal Alcohol Syndrome (NOFAS) Web site.*

*Medical Experts on Light Drinking during Pregnancy* – Short video clip in which various medical experts promote no drinking during pregnancy. However, they try reduce hysteria among women who have continued to drink during their pregnancy by getting them to embrace the benefits of abstinence, whenever that occurs during pregnancy. The YouTube link to this video is <http://www.nofas.org/light-drinking/>.

## Web Source.

### *MotherToBaby Fact Sheets.*

MotherToBaby is a service of the Organization of Teratology Information Specialists (OTIS), a nonprofit organization dedicated to providing evidence-based information to mothers, health care professionals, and the general public, with a focus on expectant mothers and their fetuses. The organization's experts have developed fact sheets to answer questions that are frequently asked in relation to exposures during pregnancy and breastfeeding. The fact sheets provide general information and are not meant to replace the advice health care providers. Nevertheless, fact sheets are available on medications (e.g., albuterol, tylenol), herbal products such as St. John's Wort, infections and vaccines (e.g., chicken pox and vaccine, hepatitis A), maternal medical conditions such as asthma and diabetes, illicit substances (e.g., cocaine), and other common exposures such as alcohol, caffeine, and carbon monoxide. Both English and Spanish versions of the fact sheets are accessible at no cost from <http://www.mothers-to-baby.org/otis-fact-sheets-s13037#5>. There is also a toll free number on the Web site that can be used to speak to a MotherToBaby expert.

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Department of  
**Mental Health &  
Substance Abuse Services**



8/15/2016

**Substance Use Best Practice Tool  
Guide**  
**FETUSES AND NEONATES**

Division of Clinical Leadership in Collaboration with the  
Division of Substance Abuse Services



## Fetuses and Neonates

Being pregnant is a very big deal not only for the mom but also for the developing fetus and neonate. Substance use is harmful to fetal development and can have lasting effects on the unborn child. The neonate can have a host of developmental problems as a result of the mother's substance use during pregnancy (WebMD, n.d.).

Harmful substance use is not restricted to use of illegal drugs during pregnancy. Legal medications can also have a direct impact on the fetus. Tobacco, alcohol, and even caffeine can have a negative impact on the fetus. Commonly used over-the-counter medicines can have a harmful effect of the unborn child. Detrimental effects can show up as birth defects, prematurity, low birth weight, and stillborn births (WebMD, n.d.). The table below shows the risks of stillborn births associated with substance use during pregnancy.

Table 1. Risks of Stillbirth from Substance Use during Pregnancy

- Evidence of any marijuana, prescription pain reliever, or stimulant use—**2.02** times greater risk of stillbirth

- Marijuana use—**2.3** times greater risk of stillbirth

- Passive exposure to tobacco—**2.1** times greater risk of stillbirth

- Tobacco use—**1.8 to 2.8** times greater risk of stillbirth, with the highest risk found among the heaviest smokers

Source: NIH, 2013.

Sometimes deficits caused by substance use are not manifested until later in the neonate's life, showing up in areas such as cognitive performance, information-processing, and attention to tasks. These are areas that are vital for success in school and in life (WebMD, n.d.).

This module focuses on two of the most preventable effects on fetuses/neonates caused by maternal substance use, fetal alcohol syndrome disorder (FASD) and neonatal abstinence syndrome (NAS). These effects are described, substance culprits are identified, research findings are presented, and prevention/intervention strategies are provided.

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## Fetal Alcohol Spectrum Disorder

**\*NOTE:** The Substance Abuse and Mental Health Services Administration (SAMHSA) Fetal Alcohol Spectrum Disorders (FASD) Center for Excellence announced that it will cease operations on April 21, 2016, due to funding cuts. Resources are supposed to be available but there are no guarantees. As a result, some links may not be accessible.

Fetal alcohol spectrum disorder (FASD) is an inclusive term that encompasses several more specific diagnoses, including FAS (Nuñez, Roussotte, & Sowell, 2011). The concept of FAS was introduced in 1973 (Golden & Finkel, 2005). FASD also includes partial FAS (pFAS), Static Encephalopathy/Alcohol-Exposed (SE/AE), Alcohol-Related Neurodevelopmental Disorders (ARND), and Neurobehavioral Disorder/Alcohol Exposed (ND/AE) (SAMHSA, 2014). ARND and pFAS are the most common diagnoses (Chasnoff, Wells, & King, 2015). FAS represents the severe end of the FASD spectrum (CDC, 2014). Partial FAS (pFAS) contains most of the growth deficiency and/or facial features associated with FAS. In addition, CNS abnormalities are severe and prenatal alcohol exposure is confirmed. SE/AE includes all features of pFAS except the growth deficiencies. Facial dysmorphism is also possible (University of Washington, n.d.).

It (FASD) is a consequence of what can happen when a woman drinks during pregnancy (NIAAA, 2013).

Individuals with ARND may have problems with behavior and learning, along with intellectual disabilities. They would not be expected to do well in school and likely manifest difficulties with memory, attention, judgment, math, and impulse control.

However, the use of the term ARND is being phased out (CDC, 2014). Persons with ND/AE have confirmed prenatal alcohol exposure but only moderate CNS dysfunction. Further, there is no evidence of growth deficiency (University of Washington, n.d.). In short, FASD incorporates alcohol-related birth defects (O’Leary et al., 2010).

It is a consequence of what can happen when a woman drinks during pregnancy. Alcohol can disrupt fetal development at any stage of pregnancy, even at the earliest stages prior to the woman knowing that she is pregnant (NIAAA, 2013). Many children exposed to alcohol during pregnancy do not meet the full criteria for a diagnosis of fetal alcohol syndrome (FAS) because they do not have the facial dysmorphology required for such a diagnosis (NIH/NIAAA, 2000; Nuñez, Roussotte, & Sowell, 2011). The United States Surgeon General estimated, however, that three more children are born without the actual physical dysmorphology for every one child born with the dysmorphia (Nuñez et al., 2011). Hence, FASD includes individuals with and without the physical signs (Golden & Finkel, 2005; Warren, Hewitt, & Thomas, 2011).

According to the FASD Center of Excellence, FASD affects an estimated 40,000 newborns in the United States every year (SAMHSA, 2009). Prevalence of FAS has been estimated between one to three per 1,000 live births in the general population, with estimates of 10-15 per 1,000 live births in some higher risk populations, such as children in foster care (SAMHSA, 2014). For the full spectrum (i.e., FASD), general population estimates are around nine per 1,000 live births. Much higher estimates (as many as 50 per 1,000 live births) have been indicated when considering reviews of in-school screening and diagnosis studies.

**According to the FASD Center of Excellence, FASD affects an estimated 40,000 newborns in the United States each year (SAMHSA, 2009).**

Retrospective analyses based on hospital admissions data suggest substantial underreporting of alcohol abuse and misuse by women, thus further disguising true prevalence (SAMHSA, 2014).

Unfortunately we do not know exactly the number of people that have fetal alcohol spectrum disorders (FASDs). Estimates from several different approaches give us our best count. Medical and other records, in-person assessments involving school-aged children, and community studies using physical examinations are among the methods used to estimate the number of people in the population living with FASDs (CDC/NCBDDD, 2015). FAS prevalence is based on birth-certificate data, the usual source of vital statistics, but supporting data may not have been recorded. Physical features are often subtle and extremely difficult to recognize in the newborn, thereby resulting in underestimations. It should also be noted that very few general pediatricians have the clinical expertise to diagnose affected children and/or to make appropriate referrals. There is further the tendency of mothers to underreport their alcohol use and/or for clinicians to resist posing questions about alcohol consumption during pregnancy (Jones & Streissguth, 2010). In many cases, primary care and other clinicians who care for children fail to consistently or routinely identify individuals with fetal alcohol syndrome (FAS), additionally hindering efforts to account for these children in developmental disabilities and birth defects monitoring programs (CDC/NCBDDD, 2004).

Babies that have been exposed to alcohol and diagnosed with fetal alcohol spectrum disorder (FASD) typically develop central nervous system (CNS) abnormalities, facial irregularities, and growth retardation (Centers for Disease Control and Prevention [CDC], 2005; Ismail, Buckley,

Budacki, Jabbar, & Gallicano, 2010). Of these, the CNS is the most critical system affected adversely by alcohol exposure during pregnancy (Warren et al., 2011). FASD is a leading cause of developmental disabilities and birth defects (Cannon, Dominique, O'Leary, Sniezek, Floyd, & FASSNet Team, 2012; Fabbri, Farrell, Penberthy, Ceperich, & Ingersoll, 2009; Warren et al., 2011). Further, newborns with exposure to heavy alcohol use in utero were more than three times as likely to be exposed to amphetamines (includes methamphetamine) and nearly twice as likely to be exposed to narcotic opiates (Shor, Nulman, Kulaga, & Koren, 2010).

Most commonly, FASD features include varying aspects of brain dysfunction. Some children have intelligence quotients (IQs) in the intellectually disabled range but many IQs fall within normal limits. Regardless, these children appear to exhibit difficult and persistent behavioral problems. It has also been shown that typical interventions may not work in curbing behavioral issues in these children. For example, sometimes children with FASD who present with symptoms of attention deficit hyperactivity disorder (ADHD) do not respond well to the typical stimulant medications. Children with FASD are likely to present with problems in processing and cognitive areas as well (Clarren & Salmon, 2010). Moreover, behavioral problems and cognitive deficits associated with FASD tend to manifest as lifelong issues (CDC, 2005). Additionally the diagnosis is a critical risk marker for premature death in the mothers of children that have been diagnosed (Li, Fisher, Peng, Williams, & Burd, 2012). Children with FASD may exhibit the following signs and symptoms:

- Weigh in as small at birth;
- Exhibit problems sleeping and eating;
- Demonstrate problems in hearing and seeing;
- Display difficulty following directions and learning how to do simple tasks;
- Exhibit difficulty paying attention and learning in school;
- Require special teachers and/or schools;
- Show a great deal of difficulty getting along with people and controlling their behavior; and/or
- Require medical care all their lives (NIH/NIAAA/NOFAS, 2006).

Based on a study of mother characteristics and behaviors, mothers of children with FASD were significantly likely to have a lower educational level; have more live born children; be older, unmarried, unemployed, and of Native American, Alaska Native or African American descent (excluding Hispanic origin). (It should be noted that the limited number and location of states involved in this study may have affected ethnicity findings.) When compared to all mothers in the United States, these moms were also significantly likely to be receiving public assistance; on Medicaid at the time of the child's birth; have a confirmed alcohol use disorder (AUD); have participated in binge drinking during pregnancy; have used cocaine or marijuana during pregnancy; have a history of mental issues; have consumed alcohol heavily (i.e., at least seven days a week) during pregnancy; had an induced abortion; and the baby tested positive for substances at birth.

These women were also significantly likely to have received treatment for their alcohol use (Cannon et al., 2012).

FASD represents a major public health issue. Cost associated with raising a child with FASD varies, depending on the source and factors included in the analysis. Moreover, cost estimates are typically only available in relation to FAS. The lifetime cost for a person with FAS has been estimated to be around two million dollars, with the majority of the costs attributed to medical, special education, and mental health treatment services (Paley & O'Connor, 2011). Overall annual cost to the U.S. healthcare system has been estimated at five billion dollars, using two cases per 1,000 live births (SAMHSA, 2014).

However, FASD is a preventable condition. (See BSAS, 2011; Fabbri, et al., 2009; Floyd, Weber, Denny, & O'Connor, 2009; Ismail, Buckley, Budacki, Jabbar, & Gallicano, 2010; Li et al., 2012; Osterman, 2011; and Warren et al., 2011, e.g.) Science has not determined a safe level of alcohol consumption during pregnancy, so the message to women of childbearing potential, which includes

Science has not determined a safe level of alcohol consumption during pregnancy (SAMHSA, 2014).

pregnant women, should be to refrain from alcohol use. FASD cannot be cured; it can only be treated (SAMHSA, 2014).

One of the national health objectives focuses on reducing drinking by women of childbearing potential. Any reduction in this number will, in turn, result in a reduction in prenatal exposure to alcohol. (A discussion of standard drink sizes can be found in the module on Medication-Assisted Treatment in this document. Women of childbearing potential who drink at risky levels place themselves at high risk of having an unplanned pregnancy. In fact, research suggests that half of all pregnancies are unplanned. Moreover, greater than half of these unplanned pregnancies happen to seven percent of the women who do not use any method of contraception, despite not wanting to become pregnant. The remaining unplanned pregnancies occur to women who use contraception intermittently or ineffectively (Fabbri, 2009). Even more devastating is the reality that many women do not recognize they are pregnant until four- to six weeks gestation (Floyd et al., 2009)

## Screening

Screening identifies the likelihood that individuals are to have a disorder, as determined by their responses to certain key questions. If they obtain a positive screen, people may be advised to undergo more detailed diagnostic testing to definitively rule out or confirm a disorder. Hence, screening results may lead clinicians to initiate further assessment, provide brief interventions, and/or arrange clinical follow-up (NIH/NIAAA, 2005).

Objective screening tools are preferred to subjective measures. It is further preferable that the screening instruments be validated for the target population, setting, and disorder of interest. The validated screening instruments should additionally have high sensitivity and specificity (SAMHSA, 2014). Sensitivity is the ability of the instrument to correctly identify individuals who actually have the disorder. In contrast, specificity is the ability of the instrument to correctly identify individuals that do not have the disorder (NIH/NIAAA, 2005).

Universal screening for alcohol use has been endorsed by the American Medical Association. However, the literature indicates that women are less likely than men to be screened or referred (ACOG, 2008). Nevertheless, Cannon et al. (2012) highly recommend using screening tools for identifying behaviors of dependent or risky drinking, drug use, or smoking in order to detect women at high risk of having a child with FAS. Agencies and venues that offer public assistance, substance abuse treatment, or services where women can be assisted in family planning may provide appropriate opportunities for risk-identification and intervention.

The Centers for Disease Control and Prevention (CDC), the National Task Force on Fetal Alcohol Syndrome and Fetal Alcohol Effect (NTFFAS/FAE), and a scientific working group (SWG) coordinated their efforts and developed the following diagnostic criteria for FAS (CDC/NCBDDD, 2004):

Facial Dysmorphism (All three facial features must be present.)

- 1. Thin vermilion border
- 2. Small palpebral fissures
- 3. Smooth philtrum (CDC/ NCBDDD, 2004)

Problems Related to Growth

- Confirmed pre- or postnatal weight or height or both, at or below the 10<sup>th</sup> percentile. Documentation can occur at any single point in time and should be adjusted for sex, age, race/ethnicity, and gestational age (CDC/ NCBDDD, 2004).

Abnormalities of the Central Nervous System

- Structural
  - Head circumference (OFC) at or below the 10<sup>th</sup> percentile when adjusted for sex and age
  - Imaging shows clinically significant brain abnormalities
- Neurological
  - Cannot be due to postnatal insult or fever, or other soft neurological signs outside normal limits
- Functional
  - Documentation of performance markedly below that expected for the person's schooling, age, or circumstances
    - Multiple domains of deficit exhibited in intellectual or global cognitive areas such that performance is below the 3<sup>rd</sup> percentile (i.e., at least 2 standard deviations below the mean on the standardized instrument); **OR**



- Documentation of deficits in three or more of the following (i.e., at least 1 standard deviation below the mean of a standardized instrument):
  - Executive functioning deficits
  - Cognitive/developmental deficits or discrepancies
  - Social skill deficits
  - Motor functioning delays
  - Problems in hyperactivity or attention
  - Other areas of deficit such as sensory, pragmatic language, memory, etc. (CDC/ NCBDDD, 2004)

### Mother's Exposure to Alcohol

- Prenatal alcohol exposure confirmed
- Prenatal alcohol exposure unknown (CDC/NCBDDD, 2004)

Evidence exists that even persons who do not meet criteria for an alcohol use disorder (AUD) can be helped through screening and brief intervention (NIH/NIAAA, 2005). In fact, the use of brief interventions by physicians in clinical office settings have been shown to be both feasible and powerful (ACOG, 2008). The Institute for Health and Recovery's (IHR's) Integrated 5 P's Screening Tool has been used in alcohol screening of pregnant women and is in the public domain. Based on Dr. Hope Ewing's 4P's (Parents, Partner, Past, and Pregnancy), the tool is designed to ask about alcohol and other substance use by individuals who are most likely to be important in a pregnant woman's life: partner, parents, past, present, and peers). It further asks an additional question about tobacco use because of the link between tobacco use and alcohol use for pregnant women. Positive response to any of the 5 P's or the tobacco use questions means that the pregnant woman would receive a brief intervention (Watson, 2010). A copy of the tool can found in the module on Women in General/Of Childbearing Potential/Pregnant as well as the Screening Tools module in this document.

The IHT 5 P's Screening Tool has been used in conjunction with the Alcohol Screening Assessment in Pregnancy (ASAP) Project for many years. There is an ASAP Curriculum which is available for purchase at <http://www.healthrecovery.org/publications/detail.php?p=21> for a nominal fee plus shipping costs.

SAMHSA recently published a document addressing FASD that contains a Screening Decision Tree for Alcohol-Exposed Pregnancy (AEP) Prevention. This "tree" includes a procedure for an opening question about alcohol use and then moves onto screening if found necessary. Suggested screening instruments are provided, as well as next steps. The tool gives clinicians a quick resource to, as accurately as possible, determine if an individual is at risk of alcohol use/abuse and whether brief intervention and referral or treatment are warranted. Detailed scripts for working with diverse individuals are provided so that clinicians can comfortably handle a variety of situations. Tips are provided for working with women who themselves exhibit characteristics or symptoms that suggest they themselves have an FASD (SAMHSA, 2014).

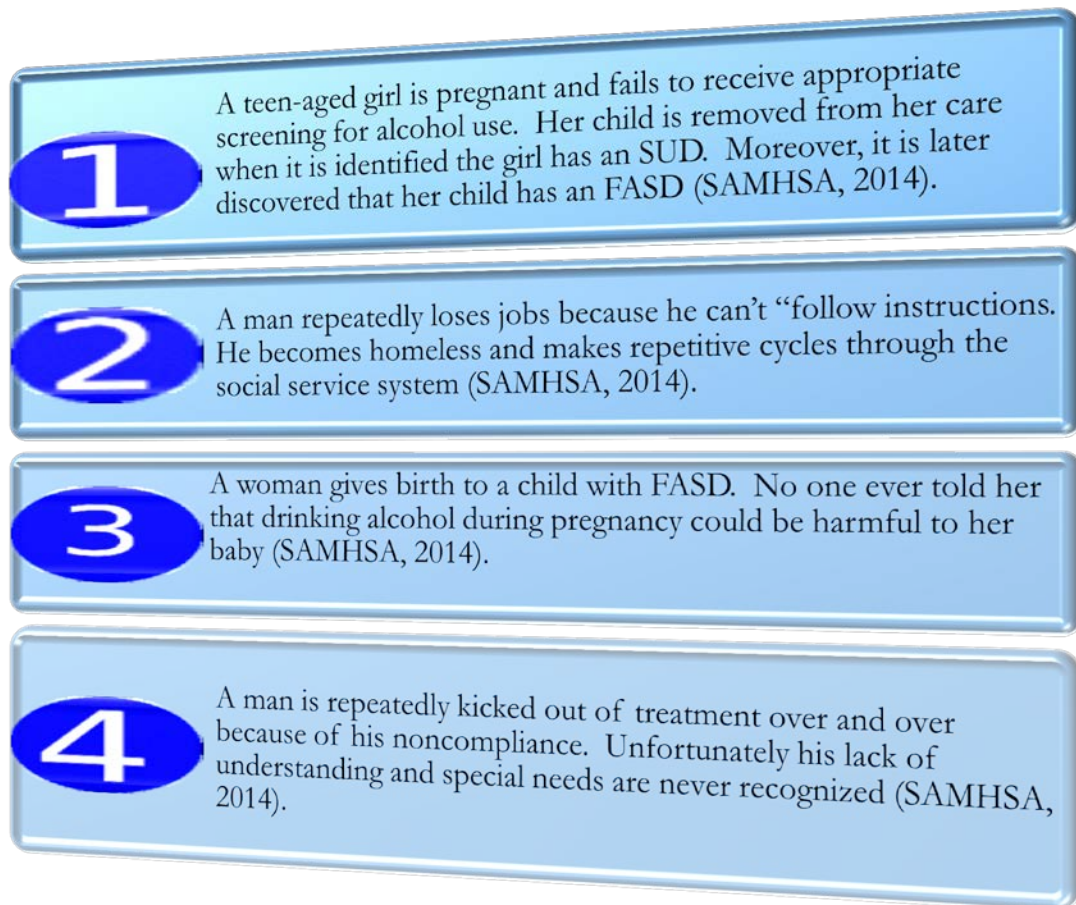
Ideally, it is recommended that all patients/clients be screened. This recommendation especially includes women of childbearing potential, whether pregnant or not, and women who present for medical care services. In particular screening should be provided to women during prenatal visits



and when their medical-care-service visit is due to injury (Kvigne et al., 2008). The two possible exceptions to screening include:

- Children below the age of nine years, as it is unlikely that they drink alcohol.
- Patients/clients who may be too ill to answer screening questions during their visit (CDC/NCBDDD, 2014).

## All-Too-Common Scenarios Involving FASD Issues



The above stories are not unusual. In fact, they are really very common. Moreover, the stories do not represent worse case scenarios. The stories do, however, reflect the realities of individuals with an FASD or women who wanted a healthy baby but did not receive the basic help they needed before and/or during their pregnancy (SAMHSA, 2014).

## Signs and Symptoms

Many different sources may provide initial recognition of a potential problem in a child or older person. Parents generally start the comparison across their children, noticing differences between

the child with FASD and his or her siblings. School systems, including Head Start and other child care centers, typically provide recognition that someone is having difficulty as well. Professionals in social services agencies such as social workers frequently recognize children and other individuals having trouble and needing an evaluation. Health care providers, especially pediatricians, often tend to be the first to screen for and detect problems. Obstetricians might even refer a newborn because of their awareness of maternal alcohol use. Fortunately, the problem recognition that shows up with FAS is exactly what “well child” visits to physician’s offices are supposed to identify. This recognition should lead the provider to initiate the appropriate next step for the individual and his or her family (CDC/NCBDDD, 2004).

A challenging but promising method of early diagnosis of FASD is analyzing levels of fatty acid ethyl esters (FAEE) in the meconium. However, this method will not help with identification of babies exposed to alcohol in the earlier part of pregnancy. Meconium is produced only in the later part of pregnancy. At this time, screening via questionnaires administered to the mother appears to be the most effective way to detect alcohol use during pregnancy. Acute alcohol ingestion can be determined through urine, blood or breath markers but require routine testing of the mother. Markers of nonacute alcohol abuse are determined through objective analysis indicating damage or changes caused by alcohol or its metabolites. Research is ongoing to identify fetal biological markers to distinctively diagnose FASD (Ismail et al., 2010) given that markers of alcohol exposure are lacking (O’Leary et al., 2010).

Newborns of women who drank heavily during pregnancy may develop a distinct pattern of congenital malformations known as fetal alcohol syndrome (FAS) (Diav-Citrin, 2011).

Diagnostically FAS requires the presence (documentation) of all three of the following: CNS abnormalities; growth deficits; and three facial abnormalities.

**Newborns of women who drank heavily during pregnancy may develop a distinct pattern of congenital malformations known as fetal alcohol syndrome (FAS) (Diav-Citrin, 2011).**

Exposure to alcohol before birth can result in an array of structural issues, including small or diminished overall head circumference (i.e., the orbitofrontal cortex [OFC] falls at or below the 10<sup>th</sup> percentile) where abnormalities to the CNS are observable through imaging techniques. Structural neurological or a combination of functional deficits (abnormalities) must be documented to meet FAS diagnostic criteria. Retardation in height and/or weight are the typical criteria used to document FAS. In a majority of FAS studies, severe growth retardation is defined as at or below the 3<sup>rd</sup> percentile. Generally, criteria define growth retardation as at or below the 10<sup>th</sup> percentile. Finally, there should be three facial abnormalities (dysmorphia). Included are 1) small palpebral fissures (eye opening); 2) smooth philtrum (groove in midline of upper lip); and 3) thin vermilion border (upper lip). Other features that may be present consist of microcephaly (small head); narrow bifrontal diameter, and an elongated, hypoplastic and flattened midface (Balatbat, 2005; Diav-Citrin, 2011). It is also important to note that confirming prenatal alcohol use only strengthens the evidence for diagnosis but will not rule out the diagnosis (Balatbat, 2005).

Compared to children with Attention Deficit/Hyperactivity Disorder (ADHD), children with FASD may have problems with overstimulation (Kooistra, Crawford, Gibbard, Ramage, & Kaplan, 2010). Yet many youngsters with FASD are frequently misdiagnosed, often described as meeting criteria for Attention Deficit Disorder (ADD), ADHD, Oppositional Defiant Disorder (ODD), and

adolescent depression, e.g. (SAMHSA, 2014). These young people might also be diagnosed with reactive attachment disorder (RAD), conduct disorder (DC), and posttraumatic stress disorder (PTSD) (Chasnoff et al., 2015).

School performance, especially mathematics, may be impacted by prenatal alcohol exposure. Alcohol exposure has also been shown to be highly associated with insecure attachments between newborns and their mothers. When mothers of newborns exposed to alcohol prenatally are emotionally supportive, the children tend to cope better with frustration and have higher levels of attachment security than children both to unsupportive mothers, regardless of any alcohol exposure (NAIARC, 2012).

A recent study examined the rate of misdiagnoses and missed diagnoses in adopted and foster children who had been referred to a mental health center for services. The literature indicates higher prevalence rates in higher risk populations such as foster children (SAMHSA, 2014). An 18 percent sample was selected at random from 3,000 charts. Using the four-digit FASD code developed by the University of Washington, researchers observed that almost 30 percent met the FASD diagnosis. However, only about 20 percent of the children that met the FASD criteria had ever been diagnosed as being affected by prenatal alcohol exposure (PAE). This means that 80 percent had a missed diagnosis. Instead of an FASD diagnosis, these children were more commonly diagnosed as ADHD (Chasnoff et al., 2015).

Individuals with FASD will likely exhibit problems in the following functional domains:

- Abstract thinking/judgment
- Behavioral regulation/Sensory motor integration
- Memory/Learning/Information processing
- Motor/Oral motor control
- Planning/Temporal skills
- Social skills and adaptive behavior
- Spatial skills and spatial memory (SAMHSA, 2014)

A large percentage of persons diagnosed as FASD also tend to experience five adverse life outcomes, including:

1. Disrupted school experiences;
2. Trouble with the law;
3. Confinement in a jail, prison, or psychiatric inpatient setting;
4. Repeated inappropriate sexual behaviors; and

5. Alcohol and substance use/abuse issues (Ismail et al., 2010).

The number of individuals in the criminal justice system with an FASD has not specifically been determined (SAMHSA, 2014), but some researchers estimate the proportion is between 15-20 percent of offenders (juvenile and adult) (Woods, Greenspan, & Agharkar, 2011). Those values, though, are believed to be gross underestimates (Woods et al., 2011). A University of Washington study of 415 clinical patients with FASD observed 14 percent of children and 60 percent of adolescents and adults reported trouble with the law, including arrests and convictions. Other studies have supported the notion of disproportionate representation of persons with an FASD in the criminal justice system, including the juvenile system (SAMHSA, 2014).

Since publication of the seminal report on FAS by the Institute of Medicine (IOM) in 1996, clear consensus has been reached on two fundamental issues: 1) It is best to have an FASD diagnostic evaluation conducted by a team of professionals from multiple disciplines (medicine, psychology, occupational therapy, and speech-language) and 2) That the team should use rigorously case-defined and validated FASD diagnostic guidelines. The five most commonly used diagnostic guidelines for forms of FASD are the 4-Digit Diagnostic Code; guidelines developed by CDC; revised guidelines of IOM; original IOM guidelines; and Canadian guidelines. Only the CDC Guidelines address FAS. Further, neither the 4-Digit Code nor the Canadian Guidelines recognize alcohol-related birth defects (ARBD) as a FASD diagnostic classification (SAMHSA, 2014).

The 5<sup>th</sup> edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM–5) addresses the psychiatric diagnosis, Neurobehavioral Disorder Associated with Prenatal Alcohol Exposure (ND-PAE). Individuals who meet IOM criteria for an FASD diagnosis may also meet criteria for ND-PAE. Essential features common to the DSM–5 psychiatric diagnosis and the IOM medical diagnoses are central nervous system (CNS) involvement and prenatal alcohol exposure. Evidence of CNS involvement can be functional (e.g., motor and coordination problems, cognitive and behavioral deficits) or structural (e.g., alterations in specific brain regions or small brain size). Advanced imaging studies have shown differences in brain structure and activity that are consistent with data from neuropsychological testing, including deficits in behavior, cognition, and sensory processing for individuals with FASD, compared to people that do not have FASD (NIH/NIAAA, 2015).

## Prevention

The Centers for Disease Control and Prevention (CDC) reported that there is no safe period of time during pregnancy for alcohol consumption (CDC, 2005; Ismail et al., 2010). Alcohol can harm a

**The CDC recommends that any woman considering pregnancy, at risk of becoming pregnant, or currently pregnant abstain from consuming alcohol of any amount, type, or consistency (Ismail et al., 2010).**

fetus at any stage of pregnancy (CDC, 2005). Moreover, too much is unknown regarding the exact mechanisms through which alcohol acts as a teratogen. Hence, the CDC recommends that any woman considering pregnancy, at risk of becoming pregnant, or currently pregnant abstain from consuming alcohol

of any amount, type, or consistency (Ismail et al., 2010). The 2005 advisory to women from the United States Surgeon General was clear and uncompromising in its message:

- During pregnancy, the expectant mother should not drink alcohol.
- If the woman has consumed alcohol during pregnancy, she should stop immediately to minimize any further risk.
- ***Any woman who has plans to become pregnant should abstain from alcohol consumption.***
- Women of childbearing potential should consult their physician and take steps that reduce any possibility of prenatal alcohol exposure.
- Health care professionals should routinely ask women of childbearing potential about alcohol consumption, tell them about the risks during pregnancy, and strongly encourage them not to consume any amount of alcohol during pregnancy (CDC, 2005).

Actually the 2005 advisory is an updated version of the 1981 warning. The latter advisory recommended that women who were planning to become pregnant or already pregnant abstain from use of alcohol. Both advisories, though, were a far cry from the warnings of the first governmental advisory provided in 1977. The 1977 advisory was published by the National Institute on Alcohol Abuse and Alcoholism and placed thresholds around what constituted safe alcohol use. It advised that more than six drinks in a single day was dangerous and recommended drinking no more than two drinks in a day (Warren & Hewitt, 2009).

The Institute of Medicine (IOM) proposed several strategies to reduce the prevalence of FASD. Universal approaches focused on all members of the population, thus all women. Examples of these approaches are notices in restaurants, bars, and other points of sale; warning labels on alcoholic beverage containers; and broad media campaigns. Unfortunately research thus far has not demonstrated substantial effectiveness for universal prevention approaches in reducing alcohol use in women at highest risk for having a child with FASD (Warren et al., 2011). Universal prevention strategies have included alcoholic beverage labeling, media campaigns, and point-of-purchase signage and outcomes have not demonstrated either reductions in alcohol use or FASDs (Floyd et al., 2009). Labeling, e.g., may have a preventive effect for women who indulge in light drinking but has not been shown to have impact on women at the greatest risk of bearing a child was FAS, those who engage in heavy drinking (NIH/NIAAA, 2000).

Selected and indicated prevention approaches have shown more promise.

Selected prevention

approaches focus on the

screening efforts for special risk groups such as women who commonly engage in binge drinking (Floyd et al., 2009). The T-ACE, has emerged as one of the more effective tools in identifying

***The most frequently used indicated prevention strategies consist of aftercare programs and intensive case management, as well as programs that combine the promotion of contraceptive use with alcohol interventions (NIH/NIAAA, 2000).***



women at risk for problem drinking (NIH/NIAAA, 2000). (The T-ACE is included in the module on Screening Tools.) Indicated prevention directly targets women known to be more vulnerable because of their high-risk drinking, e.g., common binge drinking (Warren et al., 2011). In other words, women targeted for indicated prevention are currently drinking at a level that is very likely to result in delivery of a newborn with FAS or the mother has already birthed at least one child with FAS. Researchers have much to consider when exploring the effectiveness of indicated prevention interventions. Among the considerations are whether comparisons should examine voluntary (e.g., motivational enhancement) and coercive therapies, individual and group strategies, and/or extended versus brief approaches. The most frequently used indicated prevention strategies consist of aftercare programs and intensive case management (after women have given birth to an FAS child/children), as well as programs that combine the promotion of contraceptive use with alcohol interventions (NIH/NIAAA, 2000). Strategies of promise for both selected and indicated prevention may also incorporate brief interventions. Brief interventions should involve establishment of a drinking goal, along with follow-up of progress with ongoing support (Floyd et al., 2009; NIH/NIAAA, 2000).

A number of prevention projects aimed at educating potential mothers at risk for conceiving a child with FASD have been funded. Included are projects such as Birth Control and Alcohol Awareness: Negotiating Choices Effectively (BALANCE) and the Changing High-Risk Alcohol Use and Increasing Contraception Effectiveness Study (CHOICES) (CDC/NCBDDD/DBDDD, 2015).

Project BALANCE was implemented at Virginia Commonwealth University with college students ages 18 to 24. Its objectives were to identify the prevalence of risky contraceptive and drinking behaviors and test the efficacy of the intervention through a randomized trial. The intervention addresses drinking and unprotected sex, and participating women can modify either or both behaviors (CDC/NCBDDD/DBDDD, 2015).

Project CHOICES incorporated brief interventions to prevent alcohol-exposed pregnancies among women of childbearing potential in select settings. All settings provided access to relatively large numbers of women of childbearing potential who not only drank alcohol at high-risk levels but also did not use contraception effectively. Study objectives included describing the women in the select settings and reducing the rate of alcohol consumption in women not using effective contraception while increasing contraception effectiveness in women who chose not to reduce their alcohol consumption (CDC/NCBDDD/DBDDD, 2015). So postponing pregnancy was as much a focus of the CHOICES intervention as reducing risk drinking (Floyd, 2006). It was determined that women who received both a brief motivational intervention and information were two times as likely to be at reduced risk for an alcohol-exposed pregnancy, compared to an information-only group. The CHOICES intervention has been tapped to be packaged, marketed, and disseminated (CDC/NCBDDD/DBDDD, 2015).

These educational resources are merely starting points in the prevention of FASD. Providing protection to the developing neurotransmitter pathways early during the pregnancy will be a potentially more powerful means for preventing the effects of FASD. However, more research continues to be needed (Ismail et al., 2010).

Two brief interventions have been recommended as selective prevention for women of childbearing potential who report alcohol use and have only one of two indicators: either they screen positive for at-risk alcohol use and are not pregnant OR they are pregnant and present a negative screen for at-risk alcohol use. “FLO” is one such intervention and involves a simple three-step approach of

feedback, listening, and providing options. The second intervention, “FRAMES”, is a more detailed, established method for motivating individuals toward change. Both interventions include action plans for changing alcohol-related behaviors and have demonstrated positive results (SAMHSA, 2014).

The Alcohol Screening and Brief Intervention (SBI) has been identified as a successful indicated intervention for women of childbearing potential who are pregnant and screen positive for at-risk

**The Alcohol Screening and Brief Intervention has been used successfully with women of childbearing potential who are pregnant and screen positive for at-risk alcohol use (SAMHSA, 2014).**

alcohol use. A workbook-based intervention, SBI takes 10-15 minutes to complete. Results have shown that SBI positively impacts

abstinence rates as well as key subsequent health factors in the newborn, including lower mortality and to complete. This intervention positively impacts abstinence rates as well as key subsequent health factors in the newborn, such as lower mortality and higher birth weight/length. As with all interventions, SBI should use appropriate, relevant FASD print materials in conjunction with the intervention (SAMHSA, 2014).

## Treatment

Research has shown that early detection of FASD can reduce the severity of associated impairments. Research has further shown that children diagnosed early as FASD can escape the five adverse life outcomes previously mentioned if they are reared in a good stable environment (Ismail et al., 2010).

Of course, children with FASD can be extremely challenging to the parent/caregiver because of their significant emotional, cognitive, and behavioral difficulties. Strains in the parent/caregiver-child relationship can be evident early on and may accelerate the risk of negative developmental trajectories. Numerous studies have documented high rates of disruptive behaviors, including inattention, hyperactivity, impulsivity, and conduct problems in children with FASD. Such behaviors likely tax the internal coping abilities and internal resources of their parent/caregiver (Paley & O'Connor, 2011).

Researchers have studied the effectiveness of Families Moving Forward (FMF), a sustained model of supportive behavioral consultation in increasing parental/caregiver self-efficacy and reducing child behavior problems. The model provides guidance and instruction to parents/caregivers in the use of strategies to change the environment in reducing the problem behavior triggers. Compared to parents/caregivers receiving treatment as usual, those participating in the FMF group showed significant improvements in their sense of parenting efficacy, were more likely to perceive that their family needs were met, and engaged in more self-care behaviors. Additionally, the FMF group reported significantly greater improvements in child behavior problems post intervention. The intervention is manualized but can be customized to meet the needs of individual families (Paley & O'Connor, 2011).



Cognitive, executive functioning and behavioral impairments created by FASD that interfere with academic performance and learning contribute to the high rates of disrupted school experiences for these children. Therefore, interventions that focus on the enhancement of general learning skills and/or specific cognitive or academic skills sets and include environmental adaptations might be implemented to accommodate some of the behavioral and cognitive impairments.

A small study employed Cognitive Control Therapy (CCT) as a classroom intervention for one hour weekly over the course of a 10-month school year. CCT is designed to teach children strategies that will facilitate their ability to organize and/or acquire information more efficiently. In this study, it was delivered by trained, experienced therapists. A matched comparison group was used in the control condition. Results showed marked improvements in classroom behavior for the CCT group. Qualitatively, there were improvements in motivation, emotionality, self-confidence, writing, communication skills, and academic achievement (Paley & O'Connor, 2011).

Children with FASD can benefit from various other educational and cognitive interventions. Language and literacy training was found to be effective for improvements in syllable manipulation, letter knowledge, nonword spelling, and word and nonword reading. However, these improvements have not been shown to translate into broader gains in academic achievement. A neurocognitive training program, the *Alert Program*, has been adapted for use with school-aged children with FASD. The adaptation was designed to enhance self-regulation skills and remediate executive functioning deficits. There was a significant treatment effect though additional research is needed to investigate maintenance over time. Other interventions have included Mathematics training and working-memory strategies. Results for both have been encouraging for improvements in academics but there are still questions about whether demonstrated gains are maintained over time (Paley & O'Connor, 2011).

Deficits in adaptive and social functioning, as well as safety awareness, have been shown in individuals with FASD. Often intensive levels of support are required from parents/caregivers. They demand high levels of supervision, thus placing a great deal of stress on the parent or caregiver. Nevertheless, there are interventions that have raised the skill level of FASD children in one or more of those areas. For example, FASD children and their parents have benefitted from participation in the Children's Friendship Training (CFT) program. A group-based intervention designed to help the children achieve acceptance versus rejection from other people, CFT further included a parent-assisted peer network component. Results from a small-scale study, in addition to community-based findings, showed social skill improvements for CFT-participating children and parents when compared to a control group receiving standard, non-EBP, social skills training. Additionally, parents and therapists reported higher levels of satisfaction with the children's progress. FASD children have also demonstrated the ability to benefit from computer-based safety training (Paley & O'Connor, 2011).

Safety issues must be addressed first when working with adolescents or adults that have an FASD. Evaluate the individual's physical safety, including issues of violence, harm to self (e.g., self-mutilation) or others, victimization, doo, and adequate housing. These persons have a number of risk factors related to injury and accidents, impulsivity, impaired motor coordination, poor decision-making, attention, working memory, sensory and emotion regulation, and susceptibility to peer pressure. Examples of possible health and safety concerns in adolescents and adults with an FASD are decisions about illegal and legal substances, driving, medication schedules, and risk-taking situations in which poor social problem-solving, peer pressure, and impulsivity combine to

compromise safety. Thus, it is imperative that the clinician work with the caregiver in developing a personalized safety plan for these individuals (SAMHSA, 2014).

For women at high risk of having children with FAS, there is some evidence that enhanced case management can be beneficial and possible lower rates of FAS. Moreover, comprehensive and intensive home visitation showed promise in reducing pregnancies in which the unborn fetus is exposed to alcohol when the moms have been identified as abusers of alcohol and other drugs

(Cannon et al., 2012).

**It is necessary that clinicians working with persons having an FASD be able to show flexibility and adaptability (SAMHSA, 2014).**

It is further necessary that clinicians working with

persons having an FASD be able to show flexibility and adaptability. Counselors should:

- Address any negative self-perception associated with having an FASD;
- Address, acceptance, resistance, and denial;
- Assess comprehension on an ongoing basis;
- Be aware of the person's strengths;
- Consider using a mentor approach;
- Focus on personal and self-esteem issues;
- Help the person cope with loss;
- Set appropriate boundaries;
- Understand the impact of any abuse that the person has experienced; and
- Weigh the risks and benefits of individual versus group counseling (SAMHSA, 2014).

## **Other Treatment Considerations.**

While it is important for clinicians to remember that adolescents are different from adults, it is equally important to remember that adolescents with an FASD are different from young people that develop in the typical fashion. Young people with an FASD may function at emotional and social levels well below their chronological age and present with uneven physical and cognitive profiles. Therefore, the treatment process should incorporate the nuances of the young person's experience. The adolescent's risk factors that led to the substance abuse must also be taken into account (SAMHSA, 2014).

In addition, clinicians should be mindful of issues that might be raised when working with individuals with an FASD. The clinician may feel resentment about being stuck with such challenging clients or harbor negative attitudes toward females who drank during their pregnancy. It is also possible that feelings of shame and guilt might surface for clinicians who themselves drank while pregnant or have a child with an FASD. Thus, it is paramount that clinicians keep Olson and colleagues' Reframe, Accommodate, and Have Hope strategies handy to help them deal more effectively with caregivers of persons with FASD and with themselves when issues arise (SAMHSA, 2014).

## **FASD Resources**

### **FASD Prevention Tool Kit for Women's Health Care Providers.**

In collaboration with the CDC, the American College of Obstetricians and Gynecologists (ACOG) has developed the Women and Alcohol Web site (<http://www.womenandalcohol.org/>). This Web site provides resources specifically for women's health care providers in identifying women who drink too much, as well as brief educational counseling to eliminate or reduce alcohol use. Information is also available for the general public, along with linked resources. Designed to be a one-stop choice, the Web site offers a cell phone app, current news articles, downloadable patient information sheets, and treatment referral information, among other tools.

### **NTI Upstream.**

This organization is a multimedia production and publishing company dedicated to advance the conversation around the issues of social welfare and health. Its Web site contains a wealth of resources related to FASD.

#### ***Video: The Listening Heart.***

This educational documentary chronicles the day-to-day challenges of children, parents, and families who struggle with the consequences of FAS. It offers a unique look into the world of FAS through the eyes of the children who are directly affected by the disorder, as well as medical experts and adoptive parents. Information about purchase of the video can be obtained from <http://ntiupstream.corecommerce.com/The-Listening-Heart-p26.html>.

Information about purchase of the special edition of the video can be found at <http://ntiupstream.corecommerce.com/The-Listening-Heart-Special-Edition-p27.html>. This version is designed to help both parents and professionals teach about FAS. Included is the 45-minute documentary along with a fully-scripted PowerPoint presentation on FASD.

#### ***Video: Moment to Moment: Teens Growing Up with FASD.***

Available fall of 2014, this video explores the lives of four adolescents with FASD and the effects that prenatal alcohol exposure has had and continues to have on their ability to find independence,

fulfillment, and understanding of the world around them. Also captured in the documentary are the challenges families must overcome as children with FASD reach maturity and attempt to take on the world on their own as young adults. More information about content and access to this video can be obtained at <http://www.ntiupstream.com/moment>.

## **Substance Abuse and Mental Health Services Administration (SAMHSA).**

### ***Video: Recovering Hope: Mothers Speak Out about Fetal Alcohol Spectrum Disorders.***

This award-winning video that tells the story of women who used alcohol during pregnancy and the effects the use had on their children. The hour-long video is divided into two half-hour segments to allow time for discussion within treatment sessions. A brochure is available to help counselors or facilitators prepare to show and discuss the video. There is also a brochure that can be distributed to the women after they have viewed and discussed the video. Other audiences such as family members or support groups of women who have completed treatment may also benefit from viewing and discussing this video. The video can be accessed free of charge from the SAMHSA store (1-877-SAMHSA-7), its Web site (<http://store.samhsa.gov/product/Recovering-Hope-Mothers-Speak-Out-About-Fetal-Alcohol-Spectrum-Disorders-FASD-/SMA09-3979>), or the YouTube page (<http://www.youtube.com/watch?v=m7zFJCW9Yco>) (FASD Center for Excellence, 2014a).

## **The Arc.**

### ***Brochure.***

With funding from CDC, the Arc developed a brochure to help women evaluate actions they might take related to alcohol consumption, especially if they are pregnant. Titled “Think before You Drink”, it encourages women to think twice before they undertake any drinking. The brochure has gained tremendous popularity and can be found in physician’s offices, schools, public health clinics, etc. Efforts have been made to display the brochure anywhere more education on the dangers of drinking while pregnant is needed. Document download can occur at <http://www.thearc.org/document.doc?id=3674>.

## **Training and Contacts: Tennessee.**

Our state is home to the Southeast Fetal Alcohol Spectrum Disorder (FASD) Regional Training Center. Also referred to as FASD Southeast, the training center is dedicated to improving the skills of medical and allied professionals, helping them to better address FASD and its prevention among women of childbearing potential. FASD Southeast is based at Meharry Medical College in the Department of Family & Community Medicine, Nashville, Tennessee (FASD Center for Excellence, 2014b). It is a cooperative effort among Meharry Medical College, Morehouse School of Medicine (Atlanta, GA), Tennessee State University, and the University of Louisville (KY) (Meharry Medical College Web site, n.d.).

FASD Southeast promotes its services to universities, colleges, hospitals, clinics, community health centers, as well as public and civic organizations within the southeastern United States. Service offerings are limited to the states of Alabama, Florida, Georgia, Kentucky, Louisiana, Mississippi, South Carolina, and Tennessee, and include the following services:

- Annual FASD Train-the-Trainer workshops.
- Assistance in referral and connecting interested parties in on-site training through FASD Southeast faculty or speakers bureau.
- Participation in and hosting of local, state, and regional public events efforts or efforts events to increase awareness and disseminate FASD information.
- Technical assistance and support for collaborators and new speakers or satellite teams in the southeast.
- Training for health medical/health medical care students on FASD.
- Training for health medical/medical health care professionals on Fetal Alcohol Spectrum Disorders (FASDs).
- Training for medical/health care professionals on Fetal Alcohol Spectrum Disorders (FASD).
- Web site access to FASD links and information for medical professionals and in addition to the general public.

In addition, there are two FASD contacts for the state (FASD Center for Excellence, 2014b). Their contact information is provided below:

Charlene Harmon  
Director  
Mid-South Fetal Alcohol Services  
PO Box 820835  
Memphis, TN 38182  
Phone: 901-859-4270  
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Alternate e-mail: [info@fasdsupport.org](mailto:info@fasdsupport.org)

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# Neonatal Abstinence Syndrome (NAS)

## Quick Facts

**936** Tennessee newborns experienced withdrawal from drugs their mothers used while pregnant in 2013 (A. Miller, personal communication, June 13, 2016; Miller & Warren, 2015).

- The 2013 statistic translates into greater than two neonates born with signs of drug withdrawal per day.

**1,031** newborns in Tennessee experienced withdrawal from substances their mothers used during pregnancy in 2014 (A. Miller, personal communication, June 13, 2016; Miller & Warren, 2015).

- The number represents a 10 percent increase in neonates born with signs of drug withdrawal from 2013 to 2014.

**1,039** newborns in Tennessee experienced withdrawal from substances their mothers used during pregnancy in 2015 (A. Miller, personal communication, June 13, 2016).

- The increase in cases from 2013 to 2015 was not statistically significant (A. Miller, personal communication, June 13, 2016).

The cost of care for neonates with NAS is **13** times more than cost for normal weight, average babies (Clarksville Online, 2014).

- **More Quick Facts** (*continued*)

- Using TennCare (2013) data, the average cost of births due to neonatal abstinence syndrome (NAS) was \$44,043, compared to \$7,753 for all live births and \$4,013 for non-low-birth-weight births.

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Babies with NAS- are **overrepresented** in state custody with the Tennessee Department of Children's Services (Warren, 2013).

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Research says that preterm newborns that experience NAS are **five** times more likely to be readmitted to hospitals for NAS than their full-term counterparts (Backes et al., 2012).

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The incidence of NAS here in Tennessee has increased **15**-fold, compared to a three-fold increase nationally (TDH/DFHW, 2013).

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Infants born in calendar year (CY) 2013 comprised **1.5** percent of infants (i.e., within one year of birth) in DCS custody. However, **20** percent of infants classified as NAS and born in CY 2013 were in DCS custody (TennCare, 2015).

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## What Is Neonatal Abstinence Syndrome (NAS)?

Neonatal abstinence syndrome (NAS) refers to the constellation of clinical signs associated with withdrawal from opioids in newborns and usually manifests as autonomic overreactivity, neurological excitability, and gastrointestinal dysfunction. The diagnosis is typically reserved for newborns that are part

Being born with NAS increases the risk of complications in the neonatal period and places a higher cost burden on the healthcare system (astho, 2014).

of a larger group of infants exposed to opioids, exhibit withdrawal, and require pharmacotherapy (astho, 2014). The World Health

Organization (2014) applies the term whenever a neonate is exposed to any psychotropic substances prenatally. The Tennessee Department of Health [TDH] (2015) has also noted that other substances have been implicated (Warren, Miller, Traylor, Bauer, & Patrick, 2015). Goetz & Rolloff (2012) indicate morphine, heroin, methadone, oxycodone, hydromorphone, hydrocodone, and buprenorphine as the most common substances leading to NAS. Being born with NAS increases the risk of complications in the neonatal period and places a higher cost burden on the healthcare system (astho, 2014). There are reports that NAS is a leading cause of developmental and medical problems in the newborn. However, NAS is a very identifiable condition that can be treated (GAO, 2015; Thigpen & Melton, 2014).

At least one study cited a 35 percent increase in neonatal hospital charges for NAS between 2000 and 2009. Nationally, total hospital charges nearly quadrupled between 2002 and 2009, from a cost of \$190 million to \$720 million. However, the mean length of stay (LOS) for NAS did not change. LOS continued to hover around 16 days (Jensen, 2014).

Among the complications associated with NAS are respiratory problems, seizures, prematurity, low birth weight, and feeding difficulties (astho, 2014; GAO, 2015; Siu & Robinson, 2014). An analysis of Medicaid claims data for states showed that a third of the newborns diagnosed with NAS were of low birth weight, weighing less than 5.5 pounds (2,500 grams) at birth (astho, 2014).

It should be noted that there are two major types of NAS. NAS can be caused by maternal use or prenatal use of substances that result in withdrawal symptoms in the newborn. There is further postnatal NAS that is secondary to the discontinuation of medications such as morphine or fentanyl used for pain therapy in the newborn (Hamdan, 2014).

However, this discussion will focus primarily on the NAS link to maternal use of opioids during pregnancy.

A laundry list of substances taken by pregnant mothers can be associated with NAS births (Bauer & Li, 2013; Hudak & Tan, 2012).

A laundry list of substances taken by pregnant mothers can be associated with NAS births, including buprenorphine, methadone, heroin, benzodiazepines, alcohol, barbiturates, and marijuana (Bauer & Li, 2013; Hudak & Tan, 2012). The clinical presentation of

NAS is a function of several factors, including maternal metabolism, the opioid, maternal substance-use history that takes into account the timing of the most recent use of the substance before delivery, placenta metabolism, net transfer of the substance across the placenta, infant metabolism and excretion, and other variables (Hamdan, 2014; Hudak & Tan, 2012). Its incidence ranges from 21 to 94 percent among opioid-exposed newborns, about half of whom require pharmacotherapy (Backes et al., 2012). Clinicians should be careful to rule out other factors that can cause NAS-like symptoms in newborns (Goetz & Rolloff, 2012).

Mortality is rarely associated with NAS withdrawal alone, but occurs as a consequence of infection, prematurity, and severe perinatal asphyxia. Additionally, the risk for sudden infant death syndrome (SIDS) is significantly higher among newborns that have been exposed to opiates in utero. Newborns exposed to methadone have a 3.7-fold higher risk of SIDS compared to controls. For newborns exposed to cocaine, there is a 2.3-fold higher risk for SIDS (Hamdan, 2014).

The increase in NAS births over the last decade corresponds to the rise in the number of mothers using or dependent on opiates at the time of delivery. This population of pregnant women with opioid dependence includes the spectrum addicted to heroin, abusing prescription opioids, in medicated-assisted treatment (i.e., buprenorphine maintenance or methadone maintenance), with polydrug abuse, and chronically using opioids prescribed for medical indications (astho, 2014). Opiate use in this country increased nearly five-fold from 1.2 to 5.6 per 1,000 births per year for 2000 to 2009. The incidence of NAS increased around three –fold, from 1.2 to 3.4 during the same time period. Thus, not all neonates born to mothers with a dependence on or using opiates at the time of delivery develop signs of NAS. Prenatal exposure to heroin and methadone is linked to a

**In 2010, TennCare statistics showed that babies born with NAS cost nearly six times more than a baby without NAS and they were 18 times more likely than non-NAS babies to enter state custody (TDH, n.d.).**

60-80 percent incidence of NAS. Associations with buprenorphine suggest a lower risk of NAS, though results have been inconsistent (Siu & Robinson, 2014). From 2000 to 2010, there has been a ten-fold increase in the number of NAS babies born

in our state (TDH, n.d.). More recent statistics now show a 15-fold increase of NAS births in the state (TDH/DFHW, 2013). In 2010, TennCare statistics further showed that babies born with NAS cost nearly six times more than a baby without NAS and they were 18 times more likely than non-NAS babies to enter state custody (TDH, n.d.). In calendar year (CY) 2013, the average TennCare cost for a NAS newborn was \$44,043 while the cost for a healthy newborn (i.e., non-low-birth-weight) was \$4,013. NAS babies had an average length of stay of 25.2 days compared to 2.6 days for healthy (non-low birth weight) births. Moreover, 20 percent were in DCS custody compared to 1.5 percent of infants in general within their first year of birth (TennCare, 2015).

Our state has a Neonatal Abstinence Syndrome (NAS) subcabinet comprised of commissioners and staff from the departments of Children’s Services; Health; Human Services; Mental Health and Substance Abuse Services; and Safety and Homeland Security, along with TennCare, the state’s Medicaid authority (astho, 2014; Clarksville Online, 2014; TDH, n.d.). This subcabinet was created to design and implement strategies around NAS at the three levels of prevention: primary, secondary, and tertiary (Bauer & Li, 2013; Miller & Warren, 2013; TDH, n.d.). Examples of the prevention levels include:

- Primary prevention – efforts to reduce the likelihood that women taking opioids will become pregnant while using and/or to reduce the numbers of women taking opioids
- Secondary prevention – efforts to assure pregnant women using opioids receive health care that minimizes the likelihood of delivering a baby with NAS or other problems
- Tertiary prevention – efforts to ensure newborns diagnosed with NAS receive high quality, cost effective care and are discharged to safe home environments (TDMHSAS, 2013)

The incidence of NAS in the state continued rising, along with the associated public health burden. Therefore, TDH made NAS reporting mandatory, effective January 1, 2013 (Warren et al., 2015). In fact, Tennessee was the first state to make NAS a reportable disease (Prevention Alliance of Tennessee, 2014). A total of 936 cases of NAS were reported during the 2013 calendar year (A. Miller, personal communication, June 13, 2016; Miller & Warren, 2015). Most of the cases were clustered in eastern Tennessee and slightly greater than six of every 10 cases occurred to mothers who were reported to be using one or more substances prescribed by a health care provider (e.g., maintenance medications for opioid dependency or opioid pain relievers. Such results further highlighted the need for primary prevention activities focused on the reduction of

Tennessee was the first state to make NAS a reportable disease (Prevention Alliance of Tennessee, 2014).

addiction/dependence among women of childbearing potential and prevention of unintended pregnancy among women who use opioids (Warren et al., 2015). Pregnancy Risk Assessment Monitoring System (PRAMS) 2009 data has shown that half of pregnant women in general experience unintended pregnancies compared to 86 percent of pregnant women who use opioids (Dreyzehner, 2015).

The Tennessee NAS surveillance system is an online reporting system that allows for secure and rapid collection of protected health information. Birthing hospitals report all data within 30 days of the newborn's diagnosis using a standard set of data fields. TDH staff extract the surveillance data weekly from the reporting system. Public health stakeholders have access to the data each week. Public health partners in the private and public sector use the data to inform local prevention efforts (Warren et al., 2015). Weekly summaries can be accessed from <http://tn.gov/health/article/nas-update-archive>. Summaries are available for each week starting with January 2013.

All cases of NAS included in final reports have clinical signs of NAS as a minimum requirement. Additional considerations are a maternal history of substances known to cause NAS, a positive neonatal screening test for NAS-causing substances, or a maternal screening test for NAS-causing substances. For calendar year (CY) 2015, about 72 percent of reported cases were exposed to at least one prescription drug, either prescription drugs only, or in combination with a diverted or illicit substance. Of those exposed only to prescription drugs, 81 percent were on supervised replacement therapies (i.e., medication-assisted treatment for substance abuse such as buprenorphine or methadone). Sixteen percent were exposed to supervised pain therapies and nearly 13 percent were exposed to neurologic or psychiatric therapies. It should be noted that the classes of prescription drug use are not mutually exclusive, hence percentages totaling greater than 100 percent. In CY 2014, 10 counties represented close to half of all the NAS cases: Knox, Sullivan, Davidson, Sevier,



Washington, Shelby, Greene, Putnam, Anderson, and Campbell (Miller & Warren, 2015). Exposure to only diverted or illicit drugs was more common in Middle and West Tennessee (Miller and Warren, 2015).

## Screening

A medical evaluation is very important for newborns that are suspected of having NAS. Various conditions such as neurological illnesses, sepsis, and hypoglycemia may mimic NAS (SAMHSA, 2015).

There are several screens that are provided to newborns after birth. One such screener is the APGAR: Appearance, Pulse, Grimace, Activity, and Respiration measure. This test is performed at one minute and again five minutes after birth. The score at one minute tells how well the newborn tolerated the birthing process. At five minutes, the score tells the physician how well the baby is doing outside of the mother's womb. Total APGAR scores can range from 1 to 10, with higher scores indicative of better newborn functioning after birth. Scores of 7, 8, or 9 are desired as they represent normal. Scores below 7 may signal the need for the newborn to receive medical attention. Low scores at one minute are not necessarily troubling, especially if they rise near normal by five minutes (Zieve & Kaneshiro, 2011).

The American Academy of Pediatrics (AAP) recommends that every nursery caring for infants with NAS develop a protocol that defines procedures and indications for screening for substance use in the mother (astho, 2014).

The American Academy of Pediatrics (AAP) recommends that every nursery caring for infants with NAS develop a protocol that defines procedures and indications

for screening for substance abuse in the mother. In addition, AAP promotes the use of a standardized plan for evaluation and comprehensive treatment of newborns at risk of NAS or showing signs of withdrawal (astho, 2014). Neonatal intensive care units (NICUs) are further encouraged to use an abstinence scoring tool for determining when to begin, titrate, or stop pharmacotherapy (astho, 2014).

Withdrawal occurring in NAS is generally a function of the half-life of the substance to which the newborn was exposed, with substances having a long half-life typically showing later onset of withdrawal. Opiates produce the most dramatic effects. Heroin, an opiate, has a short half-life so withdrawal can begin as early as 24 hours

following birth, peaking between 48-72 hours in most newborns. In some cases, withdrawal might be delayed for as long as six days after birth.

Newborns exposed to sedative-hypnotics in

utero may not start withdrawal until after the newborn has been discharged from the hospital (e.g.,

This modified (Finnegan) scoring tool is becoming the international standard for assessing the degree of withdrawal and parameters for (NAS) treatment (Kelly et al., 2011; Siu & Robinson, 2014).

after two weeks) because of the longer half-life of those substances. Methadone has a half-life greater than 24 hours, but acute withdrawal can occur as early as the first 48 hours following birth or as late as seven to 14 days after birth. In some cases, withdrawal can be delayed as long as four weeks following birth and subacute signs can be evident up to six months following birth (Hamdan, 2014).

A scoring system, originally developed by pediatrician Loretta Finnegan in 1975, can be used to assist healthcare personnel in determining the best course of treatment for the substance-exposed newborn. Today, most newborn intensive care units (NICUs) employ the modified version of the Finnegan tool (Nelson, 2013). This modified scoring tool is fast becoming the international standard for assessing the degree of withdrawal and parameters for treatment (Kelly et al., 2011; Siu & Robinson, 2014). It is the most predominantly used tool in our country (Goetz & Rolloff, 2012). Scoring is done after feeding in two- or four-hour intervals (Kelly et al., 2011). The scoring system delineates the cluster of symptoms that might be exhibited by a newborn with NAS. Withdrawal symptoms occur through the central nervous system (CNS), autonomic nervous system (ANS), gastrointestinal system, and pulmonary system. Symptoms associated with the CNS are irritability, high-pitched cry, tremors, seizures, and excessive sucking or poor feeding. Yawning, mottling, and sneezing are symptoms linked to the ANS. Gastrointestinal symptoms include vomiting and diarrhea/loose or watery stools. Respiratory distress and increased apnea are symptoms that are associated with the pulmonary system. All total, 21 symptoms are identified through the scoring system. A score greater than eight (8) on two consecutive administrations typically results in the use of morphine with the newborns to help ease withdrawal (Nelson, 2013).

Clinicians are admonished to think about other things that can cause NAS-like symptoms in neonates. Among them are sepsis, neonatal encephalopathy, hypoglycemia, hyperviscosity, hypocalcemia, intercranial hemorrhage, metabolic disease, and hypothyroidism (Goetz & Rolloff, 2012).

Using morphine as a first-line agent for neonates during withdrawal is supported by numerous studies including a 2010 Cochrane database meta-analysis. Morphine use in newborns with NAS suppressed seizures, decreased diarrhea, and assisted with the development of the sucking reflex (Kelly et al., 2011). Clonidine and phenobarbital are medications that also might be used to ease substance withdrawal in the newborns (Nelson, 2013). Phenobarbital, in particular, alone or in addition to the morphine, is often considered for breakthrough seizures or in cases of abuse that involved nonnarcotic substances. While not as well supported in the literature by evidence for the treatment of newborn exposure to opiates, it is a familiar medication and often employed when withdrawal stems from unknown substances. Other alternatives are methadone, buprenorphine, or oral clonidine. ***In no case should clinicians use naloxone for resuscitation at birth in newborns who are at risk for NAS.*** Naloxone use has been linked to precipitation of acute withdrawal (Kelly et al., 2011).

Toxicological screenings on urine or meconium of newborns before starting treatment are typically recommended as well (astho, 2014). Urine tests give false-negative or false-positive results regarding prenatal exposure to opioids. Meconium analysis provides information about the last two trimesters but implementation is difficult. Sometimes meconium is available at birth but it can also be delayed. Hair analysis from the mother or the baby yields information from the last trimester but can be expensive (Kale-Çekinmez et al., 2012). Length of hair is important in identification of the exposure period, for example, a 90-day period versus a seven or eight day time frame. Moreover, many

newborns do not have much hair at birth, thereby making hair testing nearly impossible (Marin et al., 2013).

### Modified Finnegan Neonatal Abstinence Scoring Tool

Modified Finnegan Scale		Date and Time in Hours										Neonatal Withdrawal Scoring Chart (Term infants)
System	Signs and Symptoms	Score										
Central Nervous System Disturbances	High-Pitched Cry	2										
	Continuous High-Pitched Cry	3										
	Sleeps <1 hour after feeding	3										
	Sleeps <2 hours after feeding	2										
	Sleeps >3 hours after feeding	1										
	Mild Tremors Disturbed	1										
	Mod-Severe Tremors Disturbed	2										
	Mild Tremors Undisturbed	3										
	Mod-Severe Tremors Undisturbed	4										
	Increased Muscle Tone	2										
	Excoriation (specify area)	1										
	Myoclonic Jerks	3										
	Generalised Convulsions	5										
Metabolic/Vasomotor/ Respiratory Disturbances	Fever (37.3°C-38.3°C)	1										
	Fever (38.4°C and higher)	2										
	Frequent Yawning (>3-4 times)	1										
	Nasal Stuffiness	1										
	Sneezing (>3-4 times)	1										
	Nasal Flaming	2										
	Respiratory Rate > 60/min	1										
	Respiratory Rate >60/min with retractions	2										
Gastrointestinal Disturbances	Excessive sucking	1										
	Poor Feeding	2										
	Regurgitation	2										
	Projectile Vomiting	3										
	Loose Stools	2										
	Watery Stools	3										
	Mas Score:41											
	Total Score											
	Scorer's Initials											

Source: Finnegan 1980 via WHO, 2009.

The tool is also one of several opioid withdrawal scales found in the *Guidelines for Pharmacologically Assisted Pharmacological Treatment of Opioid Dependence* at [http://www.ncbi.nlm.nih.gov/books/NBK143185/pdf/Bookshelf\\_NBK143185.pdf](http://www.ncbi.nlm.nih.gov/books/NBK143185/pdf/Bookshelf_NBK143185.pdf).

Screening should start with a careful maternal history and physical examination that is supplemented with toxicological testing as needed. Among the risk factors that could prompt observation include maternal report of substance use, no prenatal care or late entry into care, previous unexplained late fetal demise, precipitous labor, and placental abruption. If a urine toxicological screening is done on the infant, the specimen should be collected as soon as possible after birth. This screen will only reflect recent drug exposure. Analysis of meconium reflects substance exposure during the previous

several months in utero. However, results are typically not available for several days which means they cannot guide real-time management of the newborn (astho, 2014). Moreover, there are difficulties associated with collection of meconium (Marin et al., 2013). Nevertheless, meconium drug testing, which has 94.6 percent specificity, is often cited as the best method for detecting drug exposure during pregnancy (Bio, Siu, & Poon, 2011). Research continues to be conducted on the utility of umbilical cord blood testing in screening for NAS (astho, 2014). Umbilical cords are readily available at birth and provide ample specimen for testing. Furthermore, research findings tend to be positive. In fact, research often shows the equivalence of umbilical cord tissue in relation to meconium in identifying fetal exposure to substances such as opiates, cocaine, amphetamines, and cannabinoids. The umbilical cord agrees with meconium 99.2% for cocaine, 96.6% for amphetamines, 94.9% for opiates, and 90.7% for cannabinoids. In addition, turnaround time for results involving the umbilical cord may be more rapid because there is not the need to wait for the meconium to pass (Montgomery et al. 2006). Umbilical cord testing will further allow for the testing of many prenatal nonmedical substance exposures (Wood et al., 2014)

Newborns that have been exposed to opioids should be observed in the hospital for four to seven days and symptoms assessed with the aid of an abstinence scoring tool. The most frequently used tool is the Modified Finnegan’s Neonatal Abstinence Scoring Tool (astho, 2014). (The Modified Finnegan may also be referenced in the literature as the Neonatal Abstinence Scoring System [NASS]. For example, see Jones & Fielder, 2015.). While comprehensive, the Finnegan tool may be too complex for routine use in many hospital nurseries. In such cases, the simpler Lipsitz Neonatal Drug-Withdrawal Scoring System might be used (astho, 2014). It has only 11 items, hence making the instrument less resource intensive than the modified Finnegan. A copy of the Lipsitz is displayed below.

**Neonatal Drug Withdrawal: Lipsitz Scoring Tool**

**Instructions:** Score each category with the highest score in that time interval. Score every 3 hours for first 72 hours (if exposed to narcotics or opiates) or for first 96 hours (if exposed to Methadone or Suboxone). **A total score of 4 is recommended for initiation of pharmacologic treatment.**

					Date:	Day of Life:	(DOB=DOL #1)					
SCORING CATEGORIES					INTERVALS (Note time in columns)						COMMENTS	
SIGNS	Score 0	Score 1	Score 2	Score 3								Time and Initial
Tremors (muscle activity of limbs)	Normal	Minimally increased when hungry or disturbed	Moderate/ marked increase when undisturbed; stop when fed or cuddled	Marked increase or continuous even when undisturbed, going on to seizure-like movements								
Irritability (excessive crying)	None	Slightly increased	Moderate to severe irritability	Marked irritability even when								

			when disturbed or hungry	undisturbed												
Reflexes	Normal	Increase d	Markedly increased													
Stools	Normal	Explosiv e, but frequenc y ≤8/day	Explosive, > 8 per day													
Muscle Tone	Normal	Increase d	Rigidity													
Skin Abrasions	No	Redness of elbows, heels, pressure points when supine	Breakdown of skin at pressure points													
Respiratory Rate (bpm)	<55	55-75	76-95													
Repetitive Sneezing	No	Yes														
Repetitive Yawning	No	Yes														
Forceful Vomiting	No	Yes														
Fever >38°C or >100.4°F	No	Yes														
<b>TOTAL SCORE</b>																
<b>Screener Initials</b> _____ _____ _____ _____																

Adapted with permission.

TDMHSAS, June 2016.

A score of at least 4 on the Lipsitz signals the possible need for medication therapy for the newborn (Siu & Robinson, 2014). All tools have their limitations but provide a more objective means of determining when pharmacotherapy is necessary (astho, 2014). Current tools were designed to describe withdrawal in term or near-term newborns (AAP Committee on Drugs, 1998). Definitions of severity have not been standardized. As a consequence, it is recommended that each institution establish a way to standardize the definition and educate staff. Instituting this definition-standardization strategy enhances interrater reliability and reduces interrater variability (Siu & Robinson, 2014).

Newborns exposed prenatally to antidepressant medications, especially selective serotonin reuptake inhibitors (SSRIs), are at increased risk of NAS as well. Symptoms tend to be reported more commonly with paroxetine and fluoxetine exposure. At this time, there is no evidence to suggest neonatal withdrawal problems when mothers have used marijuana during pregnancy. There may be other issues, however (Hamdan, 2014).

## Symptoms

Symptoms of neonatal abstinence syndrome (NAS) are contingent upon several factors, including:

- The type of substance used by the mom;
- How the mother's body breaks down the substance;
- The amount of substance the mother was taking;
- Duration of substance use by the mother; and
- Whether the newborn was preterm or full term (A.D.A.M. Medical Encyclopedia, 2013).

In descending order, the most frequent symptoms associated with NAS are: tremors, high-pitched cry, sneezing, increased muscle tone, fist-sucking, and regurgitation (Kelly, Minty, Madden, Dooley, & Antone, 2011). With buprenorphine, NAS severity appears to be more a function of the use of other drugs rather than the dose (Soyak, 2013).

Other research has signaled the influence of estimated gestational age, infant birth weight, delivery type, maternal weight at delivery, maternal nicotine use and days of maternal study medication received, and the use of psychotropic medications in the expression of NAS severity in neonates exposed to buprenorphine or methadone (Kaltenbach et al., 2012).

NAS symptoms can manifest within one to three days following birth. However, symptoms may not appear for as long as five to ten days after birth (A.D.A.M. Medical Encyclopedia, 2013; GAO, 2015). Subacute withdrawal symptoms may last four to six months. These symptoms include agitation, irritability, poor socialization, and restlessness (Kelly et al., 2011; SAMHSA, 1993)

## Prevention/Early Intervention

### Prevention.

The most effective way to reduce substance use and/or addiction during pregnancy is to provide routine screening and education to women of childbearing potential *before conception* (Keegan, Parva, Finnegan, Gerson, & Beiden, 2010).

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#### *In advance of pregnancy:*

- Women should discuss the use of voluntary, reversible long-acting contraceptives (VRLACs) with their obstetrician/gynecologist (OB/GYN) (Dreyzehner, 2015; Warren, n.d.; Warren, 2013). VLAC methods include birth control implants and intrauterine devices (IUD). These methods are highly effective in preventing pregnancy, easy to use, and last for several years. Equally important is the fact that VRLACs are reversible and can be removed at any time if the woman wants to become pregnant or stop using them (ACOG, 2014).
- Women should discuss all medications as well as alcohol and/or tobacco use with their health care provider.
- If already using substances, including tobacco and/or alcohol, women should ask their health care provider for help in curbing and ultimately stopping use as soon as possible (A.D.A.M. Medical Encyclopedia, 2013).

#### *If already pregnant:*

- Women should inform their health care provider about their substance use, including use of alcohol and/or tobacco, discuss the best way to stop using while keeping you and the fetus safe (A.D.A.M. Medical Encyclopedia, 2013).
- Women should discuss future use of voluntary, reversible long-acting contraceptives (VRLACs) with their obstetrician/gynecologist (OB/GYN) (Dreyzehner, 2015; Warren, 2013).

Consistent with recommendations from other medical specialties, the American Pain Society (APS) and the American Academy of Pain Medicine

(AAPM) admonish clinicians to provide counseling to women of childbearing potential about the

Clinicians should counsel women of childbearing potential about the risks and benefits of chronic opioid therapy during pregnancy and after delivery (astho, 2014).



risks and benefits of chronic opioid therapy during pregnancy, as well as following delivery (astho, 2014).

## Early Intervention.

The most useful early intervention involves staff training. Lack of standardization of a definition of severity, even within hospitals, has been discussed previously. Therefore, nurses and/or other appropriate clinical staff should be properly trained in how to score screening tools such as the modified version of the Finnegan tool. Inaccurate scores will lead to inappropriate treatment and increased length of stay for the newborns, neither of which are positive outcomes (Nelson, 2013; Siu & Robinson, 2014).

Establishing interrater reliability is critical and some studies have examined gaps in staff scoring of the Finnegan instrument. For example, nurses in a level 3 neonatal intensive care unit (NICU) in Milwaukee, WI, conducted an interrater reliability study and observed that identification of moderate to severe tremors in the undisturbed (i.e., not being handled) newborn was the symptom scored incorrectly most often. Eighty-two percent failed to score the symptom correctly. About a fourth missed moderate tremors when the newborn was disturbed and almost 10 percent missed scoring the newborn for hyperactive moro reflex. They further found other gaps such as difficulty scoring the newborn for sleep when he/she always needed to be held or in a swing, for instance. Hence, such training is key, especially within the same facility.

## Treatment

Treatment goals in the management of NAS should focus on prevention of complications associated with NAS and restoration of normal neonate activities (i.e., sleep, weight gain, nutrition intake, and adaptation to the social environment). Further potential risks and benefits of medication therapy for the neonate must be assessed. Prevention of possible complications would register as a benefit of treatment whereas hospitalization and prolonged medication exposure are potential risks. It is very likely that maternal-neonate bonding will be affected as well (Siu & Robinson, 2014).

## *Non-pharmacological Treatment.*

Non-pharmacological management that incorporates behavioral treatments should be the first approach for all newborns exposed to opioids to help them eat, sleep, gain weight, and interact with caregivers (GAO, 2015; Siegler, DeLoache, & Eisenberg, 2010).

According to the American Congress of Obstetricians and Gynecologists (ACOG) and the American Academy of Pediatrics (AAP), initial treatment for newborns with NAS should not involve medication (GAO, 2015). Non-pharmacological

management that incorporates behavioral treatments should be the first approach for all newborns

exposed to opioids to help them eat, sleep, gain weight, and interact with caregivers (GAO, 2015; Siegler, DeLoache, & Eisenberg, 2010). Helpful non-drug, interventions include, but may not be limited to:

- Careful swaddling to avoid autostimulation in the newborn. Swaddling involves close wrapping the newborn in a cotton sheet or blanket. This technique gives the newborn a sense of comfort and security he/she once had in the mother's womb. Swaddling helps the infant to remain calm and not become overwhelmed by his/her environment. Autostimulation theory contends that infants will spend less time in rapid eye movement (REM) sleep if they are exposed to a lot of stimulation during wakefulness. And REM sleep is important. It is hypothesized that the parts of the brain linked to memory and learning are stimulated during this phase of sleep. Moreover, REM sleep helps renew and restore energy to the body, which positively impacts overall health (Siegler et al., 2010).
- Minimizing stimuli such as sound and light.
- Early response to the newborn's signals.
- Providing positioning and comforting techniques such as pacifier use, rocking, and swaying.
- Feeding in smaller, more frequent volumes, thus promoting adequate growth (astho, 2014). Experts indicate that feedings of hypercaloric formula might be necessary to meet the high caloric requirements for proper growth (Jensen, 2014). A caloric intake of 150 to 250 kilocalorie/kilogram/day should be achieved (Sui & Robinson, 2014).
- Complementary and alternative medicine techniques have also been explored for neonatal withdrawal. Physical therapy and massage therapy can be used to treat overstimulation and hypertonicity. Music therapy has been shown to calm neonates and regulate sleep patterns. Lavender aromatherapy and exposure to the mother's scent have been shown to decrease cortisol levels and reduce stress in the newborns. Acupressure or acupuncture has additionally been offered as another potential alternative treatment for neonatal withdrawal (Sutter, Leeman, & Hsi, 2014).

Not all newborns exposed prenatally to narcotics will need specialized care. Initial appropriate hospital settings for newborns likely vary between institutions and by clinical severity. Infants at risk for opioid withdrawal may be

observed in neonatal intensive care units (NICUs) of varying levels, a Level 1 nursery apart from the mother, or rooming-in with the mother in a regular postpartum unit. A study

**Not all newborns exposed prenatally to narcotics will need specialized care (Kelly et al., 2011).**

conducted in England compared newborns with NAS who underwent treatment in the equivalent of a NICU to a group whose treatment was routine postnatal rooming-in. The researchers observed shorter length of stay for the latter group, with no other differences in outcome. A 2007 Vancouver study found that "rooming-in" was linked to a significant decrease in the need for treatment for

NAS and that the mothers of the “rooming in” newborns were more likely to take their babies home with them (Kelly et al., 2011; Sutter et al., 2014). There is further evidence that fostering the mother-infant dyad early in the neonatal period through examinations in the mother’s room and teaching mothers to respond to infant behavior can enhance nurturing behaviors that are crucial to infant development. Moreover, the practice of rooming-in appears to help support breastfeeding, when appropriate (Sutter et al., 2014).

It is likely that pharmacotherapy will be indicated to relieve moderate to severe NAS signs and prevent complications such as seizures, fever, and weight loss, especially if the newborn does not respond to the non-pharmacological support (astho, 2014; Siu & Robinson, 2014). All pharmacotherapy with newborns should be undertaken with caution because it can prolong the hospital stay and may interfere with mother-newborn bonding (astho, 2014).

## *Pharmacological Treatment.*

First-line pharmacotherapy for withdrawal from opioids in newborns is treatment with an opiate. Survey data from our country and the United Kingdom indicate that most clinicians choose to use morphine or methadone as the first-line agent, 83 percent and 94 percent respectively. Morphine

**First-line pharmacotherapy for withdrawal from opioids in newborns is treatment with an opiate (Siu & Robinson, 2014).**

tends to be the more frequently used of the two agents (Siu & Robinson, 2014).

Typically the use of morphine in the treatment of NAS is limited to an inpatient setting (astho, 2014; Siu & Robinson, 2014). Several oral solution concentrations of 2, 4, and 20 milligrams (mg)/milliliters (mL) are commercially available. However, these solutions require further dilution from their original dosage form to a final concentration of 0.4 mg/mL. The Institute of Safe Medication Practices (ISMP) also recommends aqueous oral solution of morphine prepared from the morphine injection dosage formulation (Siu & Robinson, 2014).

Methadone can be used and weaned after discharge from the hospital. However, outpatient dosing would require consistent follow-up and teaching for families, especially for the mother or caregiver (astho, 2014). Because of its longer half-life, 26 hours versus 8 hours with morphine, methadone requires less frequent dosing and may potentially lead to drug accumulation. Methadone 1 mg/mL oral solution does not require further dilution. Methadone oral solution concentrations are also available in 2 and 10 mg/mL. Cases of QT prolongation from the use of methadone have been reported in adults, though none have been documented in pediatric services (Siu & Robinson, 2014). Isemann, Meinzen-Derr, & Akinbi (2011) explored factors associated with favorable response to methadone therapy for NAS infants. They observed that the severity of NAS might be mitigated if methadone was titrated to the lowest effective dose during pregnancy. This finding was especially prominent for preterm newborns. Encouraging breast milk feeds, weaned gradually, were also found to be helpful.

A Vermont study showed shorter hospital stays for newborns treated with methadone, compared to morphine. Newborns treated with methadone had average hospital stays of six days while the national average for hospital stays of newborns treated with morphine was 16 days (astho, 2014).

The study further pointed to the adverse effects linked to opioid therapy, including respiratory depression, constipation, urinary retention, sedation, twitching, and hypotension (Siu & Robinson, 2014).

Buprenorphine is a more recent entry into the treatment of NAS. It is metabolized by the cytochrome P450 enzyme 3A4 to the active metabolite, norbuprenorphine. Buprenorphine is only available commercially as an injection of 300 mcg/mL and as a sublingual tablet requiring extemporaneous compounding to a final concentration of 75 mcg/mL (Siu & Robinson, 2014).

A randomized, controlled, double-blind, double-dummy, flexible-dosing study (MOTHER: Maternal Opioid Treatment: Human Experimental Research) compared buprenorphine and methadone for use in comprehensive care of 175 pregnant women with opioid dependency at several sites in the United States and one each in Canada and Austria. In addition to a focus on NAS treatment, the study addressed prevention and understanding of NAS. Results revealed significantly less morphine treatment, shorter hospital stays, and shorter duration of treatment for NAS newborns whose mothers were treated with buprenorphine compared to methadone-treated mothers (Fullerton et al., 2014; GAO, 2015; Hamdan, 2014; Jones et al., 2010). There was no difference in the need for NAS treatment in methadone- versus buprenorphine-exposed neonates. Treatment continuance, however, was lower for women in the buprenorphine group compared to the methadone group (Siu & Robinson, 2014). [A number of studies, randomized and nonrandomized, have been evaluated in the work by Jones et al., 2012.]

Paregoric, an anhydrous morphine available as 0.4 mg/mL, was the earliest opioid used to control NAS. However, its use as a NAS treatment is no longer recommended. Paregoric contains various potentially toxic ingredients, such as camphor, ethanol 44%, noscapine and papaverine, anise oil, benzoic acid, and glycerin (Bio et al., Siu & Robinson, 2014). Tincture of opium has also been used in the treatment of NAS. It contains fewer toxic additives than paregoric, but the solution still contains multiple narcotic alkaloids (i.e., codeine) and ethanol 19%. Tincture of opium contains opium 10 mg/mL so it requires a 25-fold dilution to produce the 0.4 mg/mL morphine equivalent. An ISMP report addresses the dangers of mistaking tincture of opium for paregoric. Failing to dilute and prepare it in a 25-fold dilution to a final concentration of 0.4 mg/mL can potentially result in dangerous medication errors. The possibility of this potential danger causes many pharmacies not to prepare diluted tincture of opium for NAS treatment (Siu & Robinson, 2014).

Adjunct pharmacotherapy in the form of phenobarbital and clonidine may be indicated for newborns exhibiting withdrawal following polydrug exposure (astho, 2014). When carefully monitored, phenobarbital therapeutic drug levels of 20 to 30 mg/dL have demonstrated effective control of NAS symptoms. It should be noted, however, that phenobarbital for the treatment of NAS also has drawbacks. For example, phenobarbital causes CNS depression, lacks relief of gastrointestinal signs, impairs suck reflex, delays bonding between mother and newborn, produces rapid tolerance to sedative effect, and possesses pharmacokinetic/pharmacodynamic properties, such as being a cytochrome P450 inducer and having a prolonged half-life (45-100 hours) (Siu & Robinson, 2014).

Clonidine ameliorates autonomic overactivity, such as restlessness, diarrhea, hypertension, diaphoresis, and tachycardia, which may lead to rebound autonomic activity if clonidine is abrupt withdrawn. Other adverse effects linked to clonidine include hypotension and metabolic acidosis. Only a few studies involving clonidine in the treatment of NAS are available and they tend to consist of very small samples. However, when clients were treated with clonidine 0.5 to 1 mcg/kg orally

every six hours for NAS, the results showed clonidine may be a reasonable alternative (Siu & Robinson, 2014).

A study of medications primarily used to treat NAS from 2004 to 2011 found variation across hospitals. It appears that the type of medication used was linked to variance in length of stay, length of treatment, and hospital charges. Moreover, only slightly more than 35 percent of the hospitals studied employed the same treatment more than 80 percent of the time. Fourteen hospitals were included in the study (GAO, 2015). Research shows the incidence of newborns needing pharmacological therapy in the treatment of NAS ranges from 60 percent to 80 percent (Siu & Robinson, 2014).

When pharmacologic treatment is necessary for newborns with NAS, settings other than hospitals might be considered. Nearly 30 percent of special newborn units in the United Kingdom discharged the babies to their homes while they were on medications, including phenobarbital and morphine. Having safety plans for discharge was critical. Australia also tested sending newborns home with

**It is imperative that newborns prenatally exposed to narcotics receive careful consideration and safety plans for discharge (Kelly et al., 2011).**

families, even when families might be categorized as chaotic. These newborns were hospitalized for a minimum of 48 hours prior to going home in an effort to catch any late onset NAS symptoms. Study

researchers observed a 92 percent follow-up rate and shorter lengths of treatment with morphine or phenobarbital for the babies (Kelly et al., 2011).

### ***Other Findings.***

Infants with greater birth weights may have greater stores of opiates and experience a longer period of withdrawal. This scenario further translates into longer length of stay (Bio et al., 2011).

NAS newborns treated with buprenorphine exhibited shorter lengths of stay and shorter treatment time than the morphine group (Bio et al., 2011; Jones et al., 2012).

Morphine was determined more effective than phenobarbital in reducing the length of treatment for NAS (Bio et al., 2011).

A combined inpatient/outpatient treatment study was conducted at The Ohio State University Medical Center for methadone-treated mothers and their methadone-exposed newborns. This study established community-based strategies in conjunction with inpatient care of the NAS newborns. A single dedicated physician delivered both inpatient and outpatient care to the families, providing a long-term relationship. In addition, outpatient staff assigned to the family were appropriately trained on NAS and its effects on the infant, mother, and/or other family members. Family members were also taught how to monitor and care for NAS symptoms. Results showed substantial reductions in cost of care and hospital stay (Backes et al., 2012).

## Aftercare

It is imperative that newborns prenatally exposed to narcotics receive careful consideration and safety plans for discharge. At the very least, the at-risk newborns should remain in the hospital for at least 48 hours to monitor any late onset NAS symptoms. It is further possible that some newborns may be good candidates for outpatient treatment and weaning from medication (Kelly et al., 2011).

Breastfeeding of babies with NAS whose mothers participated in opioid-replacement therapy via buprenorphine or methadone is highly encouraged, especially if the mothers are not HIV-positive, not using additional drugs, and there are no other contraindications (ACOG, 2012; Kelly et al., 2011; Prasad, 2014; Thigpen & Melton, 2014). Research involving mothers on opioid-replacement therapy has sufficiently demonstrated that concentrations of buprenorphine or methadone in breast milk are low (Prasad, 2014). Research has additionally shown that neonates exposed to opioid-replacement medications have lower rates of NAS (Kelly et al., 2011). Breastfeeding by mothers on opioid-replacement therapy is supported by the American Association of Pediatrics (AAP) (Backes et al., 2012)

**Breastfeeding of babies with NAS whose mothers participated in opioid-replacement therapy via buprenorphine or methadone is highly encouraged, especially if the mothers are not HIV-positive, not using additional drugs, and there are no other contraindications (ACOG, 2012, e.g.).**

In the event of intoxication at birth, it may be necessary to pump and discard the first feed. However, there should be no concerns past the first pump (Kelly et al., 2011). Outcomes for breastfed newborns are positive as well. LOS is shorter and significantly fewer NAS scores have to be done (McQueen, Murphy-Oikonen, Gerlach, & Montelpare, 2011; Pritham, Paul, & Hayes, 2012). The American Association of Pediatrics (AAP) highly suggests that breastfeeding mothers that use substances be treated with methadone because of its minimal transfer into human milk, irrespective of the methadone dosage (ACOG, 2012; Backes et al., 2012).

## Care at Home/After the Hospital.

It is possible that withdrawal symptoms may continue for as long as six months following the newborn's hospital stay. Below are examples of behaviors the newborn may exhibit along with calming suggestions:



Prolonged and/or high-pitched crying:

- Reduce loud noises, bright lights, excessive handling.
- Hold the baby close to your body.
- Try humming or gentle rocking (WAPC, n.d.).
- Give the baby a warm bath.
- Take the baby for a ride in the car or stroller.
- Offer the baby a pacifier. This may help satisfy your baby's need to suck. However, **never** put the pacifier on a cord or string around the baby's neck and **never** use a nipple for a pacifier (The OSU Wexner Medical Center, 2012).

Sleeplessness:

- Change to a clean, dry diaper and watch closely for rash or skin irritation. Treat as directed by your baby's health care provider.
- Feed the baby on demand and provide frequent nursing (breastfeeding).
- Reduce noise, bright lights, patting or touching the baby too much.
- Try playing soft, gentle music and/or provide gentle rocking (WAPC, n.d.).

Excessive sucking of fists:

- Avoid using lotions or creams as the baby may suck on them.
- Cover the baby's hands with mittens or soft gloves if his/her skin becomes damaged.
- Keep areas of damaged skin clean (WAPC, n.d.).

Difficult or poor feeding:

- Allow time for rest between sucking.
- Feed in quiet, calm surroundings with very little noise or disturbances.
- Feed small amounts often (WAPC, n.d.).



Sneezing, stuffy nose or breathing troubles:

- Always place the baby to sleep on his or her back.
- Avoid overdressing or wrapping baby too tightly in blankets.
- Feed the baby slowly, allowing for rest periods between feedings.
- Keep the baby in semi-sitting position, well supported and supervised.
- Keep the baby's nose and mouth clean.
- Use smaller, more frequent feedings (WAPC, n.d.).

Spitting up or vomiting:

- Burp the baby each time he/she stops sucking and after each feeding.
- Keep the baby and his/her bedding clean. Any unclean smells may increase irritability and/or irritate the baby's skin.
- Support the baby's cheeks and lower jaw to enhance sucking/swallowing efforts (WAPC, n.d.).

Hyperactivity:

- Avoid excessive handling of the baby.
- Avoid over wrapping the baby.
- Keep the baby in a quiet room (WAPC, n.d.).

In addition, the new mom should:

- Keep all appointments for the baby;
- Seek help from family/friends/other supports to care for the baby so she can get necessary breaks;
- Use available community services; and
- Consult with your health care provider, including substance abuse treatment specialist, about your progress and/or any adjustments in your treatment (WAPC, n.d.).

The East Tennessee Children’s Hospital (ETCH) Pediatric Medical Group has also identified withdrawal signs and symptoms, information on why babies experience these symptoms, and strategies that parents/caregivers can use if the symptoms occur:

<b>Signs &amp; Symptoms</b>	<b>Why Babies Have This</b>	<b>What Parents/Caregivers Can Do</b>
Excessive/continuous high pitched cry	Withdrawal from drugs can make the baby very irritable. It can be very uncomfortable and sometimes painful.	Swaddle the baby, holding him or her close, or offer a pacifier.
Sleep cycle problems	Symptoms of withdrawal can make it difficult for the baby to sleep.	Newborns need sleep in between their feedings. If the baby wakes up, offer a pacifier to help the baby go back to sleep. During feeding is the best time to hold the baby.
Hyperactive Moro reflex	Moro reflex is a normal reflex for newborns. Babies experiencing withdrawal have sensitive CNSs that can cause extra abnormal movements (jerks and/or jitters) after the Moro reflex.	Come near the baby quietly. Do not speak loudly. Also use a firm, yet gentle, pressure when touching the baby. Do not stroke the baby.
Increased muscle tone	Withdrawal can make the baby stiff and hard for him or her to bend the legs and arms.	This symptom will eventually go away but it may take several weeks to disappear. Be very gentle during diaper changing.
Excoriation (skin breakdown)	When irritable during withdrawing, the babies will rub their chins, elbows, noses, cheeks, knees, and toes against sheets, blankets, or clothing.	Keep the baby swaddled. It may be helpful to place mittens on the baby’s hands to prevent him or her from scratching the face.
Myoclonic jerks (jerking or twitching of legs and/or arms)	Babies in withdrawal can have extremely sensitive CNSs which can be easily stimulated by touch and/or sound.	Come near the baby quietly. Do not speak loudly. Also use a firm, yet gentle, pressure when touching the baby. Do not stroke the baby.
Seizures	Rare but a very serious symptom of withdrawal.	Call 911 immediately.
Sweating	This is not usual for babies, but withdrawing increases metabolism which will sometimes cause them to sweat.	Do not overheat the baby. Keep him or her in light clothing or just a diaper while the baby is swaddled.
Increased temperature (hyperthermia): greater than 99 axillary (armpit)	As with sweating, withdrawing increases metabolism which may cause the baby to run a fever.	Do not overheat the baby. Keep him or her swaddled in a light blanket. Do not give any medicines to the baby without first talking to the baby’s doctor.
Frequent yawning	This is not usual for babies, but withdrawing may cause the baby to yawn often.	This symptom improves as withdrawal symptoms subside.
Mottling	This is marbled, discoloration of the skin, especially on the trunk, chest, legs, and arms.	This symptom is not harmful and can be normal for babies in withdrawal. It will go away.

Signs & Symptoms (continued)	Why Babies Have This (continued)	What Parents/Caregivers Can Do (continued)
Nasal stuffiness	Babies breathe through their nose so it can be frustrating for babies in withdrawal to get stuffed up. It is a symptom of withdrawal and does not mean they are sick.	Do not suction the nose frequently as this action can make the stuffiness worse. Suction the nose only if there is drainage.
Sneezing	Sneezing is not normal for babies and is a symptom of withdrawal.	This symptom eventually goes away as the symptoms of withdrawal subside.
Nasal flaring	Flaring of the nostrils during breathing is a sign that babies may be having a difficult time breathing.	Hold the baby upright to help him or her breathe easier.
Increased respiratory rate (breathing greater than 60 times per minute)	Breathing fast is a symptom of withdrawal. Sometimes the baby's ribs can be seen when he or she breathes. This is called "retraction".	Keep the baby calm, holding him or her upright especially after a feeding.
Excessive sucking	Sometimes babies in withdrawal will suck excessively on their hands, pacifier, or anything else that comes near their mouth.	Keep the baby calm, especially before a feeding. Wrap him or her tightly in a blanket and offer a pacifier.
Poor feeding	Sucking on a bottle may be difficult even if the baby sucks well on a pacifier.	Do not stimulate or rock the baby while bottle feeding. Keep him or her swaddled during feeding. Help pace the baby while feeding by removing the bottle at intervals and allowing him or her to choose the eating pace.
Regurgitation or vomiting	A wet burp or little spit up during or after a feeding is normal for a baby. Babies in withdrawal may spit up more than is normal. Vomiting excessively during or after a feeding is also not normal and known as feeding intolerance.	Talk to the doctor about this problem. He or she can tell you if your baby is getting enough to eat in order to gain weight. Pacing the baby while feeding may help in the meantime.
Watery or loose stools	Babies in withdrawal sometimes get upset stomachs and stomach cramps. This can cause loose, diarrhea-like stools that lead to a red, irritated bottom.	Be especially gentle when changing the baby's diaper. Use sterile water wipes and put skin barrier (i.e., diaper rash cream) on the bottom for protection, even if the bottom is not red yet.

Source: Cook, 2015.

Many of these care strategies have been put into practice in Huntington, WV. In 2013, about seven of every 1,000 babies born had a diagnosis of NAS. However, the number was 37 of every 1,000 babies for the state of West Virginia and 108 of every 1,000 babies for the large regional hospital in Huntington that served individuals within a three-hour radius. In 2014, 139 of the babies born in that hospital were diagnosed as NAS. Thus, these babies were taking up a preponderance of the

beds in the neonatal intensive care units (NICUs) and causing the hospital to turn down sick and needy babies from other hospitals (Shiffman, 2015).

With significant help, a transition from the hospital to home was born in Huntington: **Lily's Place**. This place allows babies to heal faster and their mothers to learn how to successfully parent them. Each baby is provided a room of its own. Program requirements include having the mother: 1) visit the baby six times each week; 2) help the nurses care for the baby; 3) take parenting classes; 4) learn the baby's stress cues and how to address them; 5) meet regularly with the social worker; and 6) attend her scheduled addiction recovery sessions. Enrollment in the program requires that the

(Lily's Place) Program requirements include having the mother: 1) visit the baby six times each week; 2) help the nurses care for the baby; 3) take parenting classes; 4) learn the baby's stress cues and how to address them; 5) meet regularly with the social worker; and 6) attend her scheduled addiction recovery sessions (Shiffman, 2015).

mother sign the baby over to state custody. Upon successful completion of the program, the mother gets the baby back (Shiffman, 2015).

In short, the mothers are given education and knowledge at **Lily's Place** to be able to successfully take care of

their infant at home. Upon program entry, each mother watches a video that informs her that she will not be taking home a completely normal newborn. The mother is also told that the baby will have some bad days. However, mothers are instructed on the importance of remaining calm during this period. Mothers are given "calm" strategy options, such as putting the baby in a car seat or on the floor and walking away for a few minutes to collect themselves if they find themselves becoming frustrated. Mothers are admonished to never do anything that could harm the baby, which includes not shaking the baby (Shiffman, 2015).

## Alternative Terminology

NAS was initially described in the 1970s. However, clinical features and treatment of withdrawal by neonates from opioids has been deemed a specific form of NAS and recently termed neonatal opioid withdrawal syndrome (NOWS) (Sutter et al., 2014). At the time of this writing, it is unclear whether NOWS will replace the NAS terminology. This mention is included merely to point out that other terminology may be used to describe drug withdrawal of neonates, especially when exposure involves opiates.

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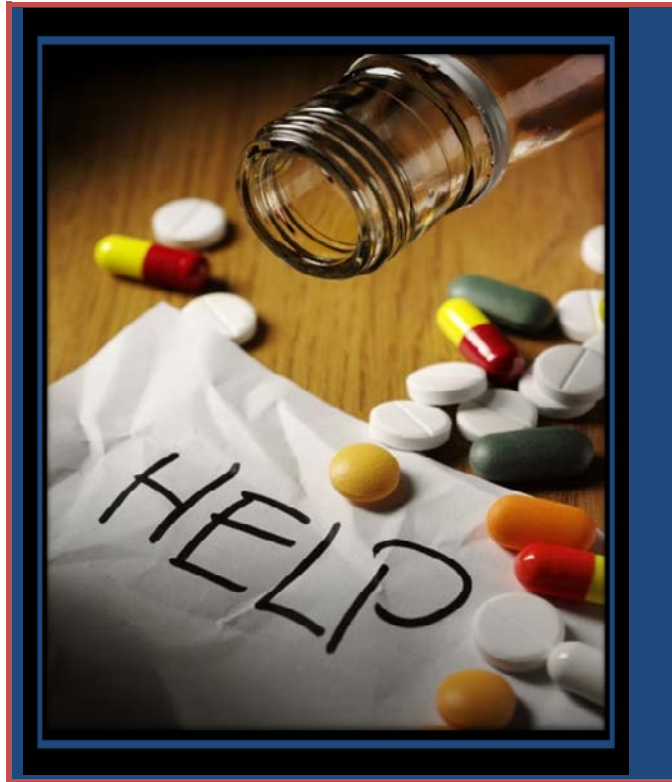
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Department of  
**Mental Health &  
Substance Abuse Services**



8/15/2016

**Substance Use Best Practice Tool  
Guide**

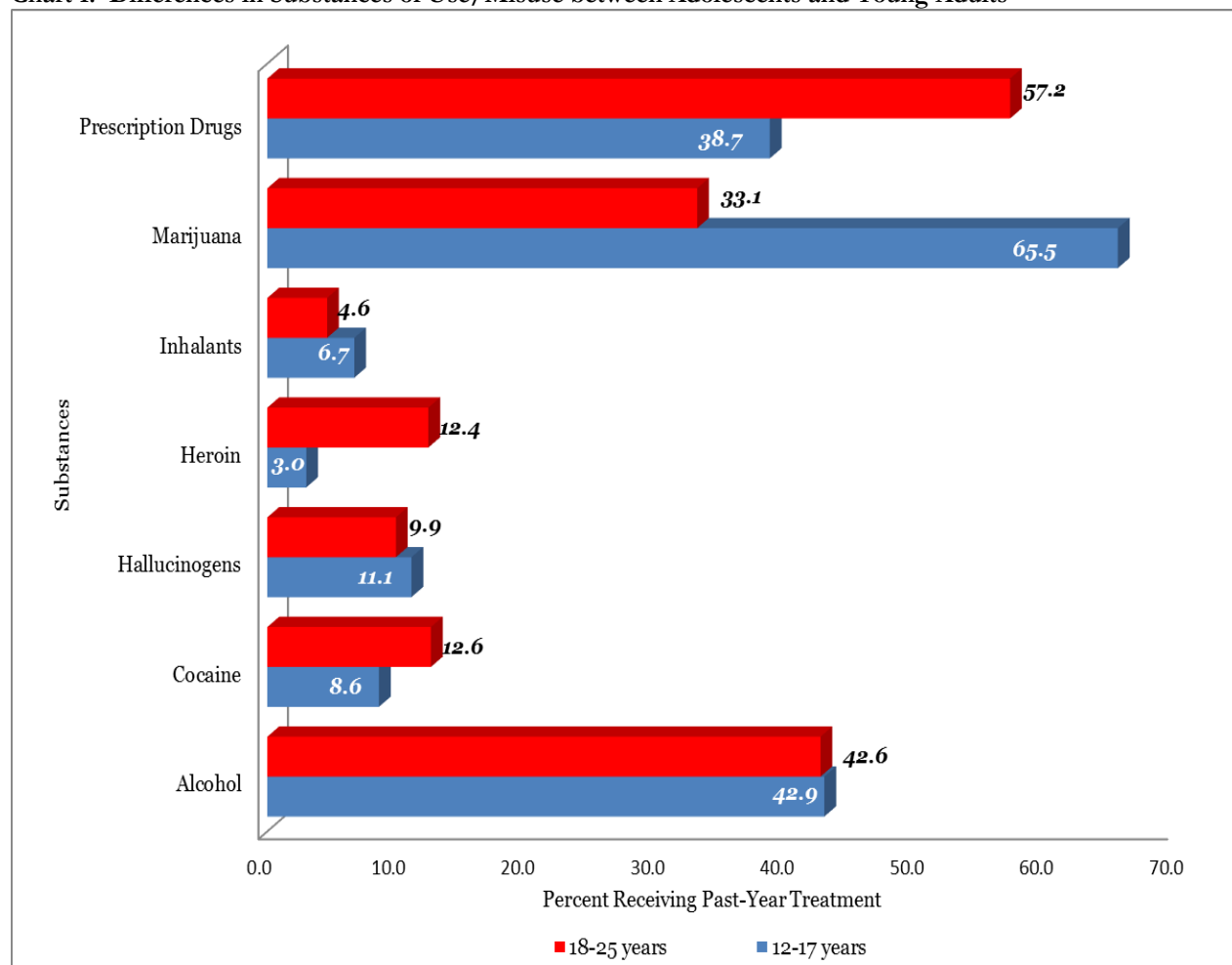
**YOUNG PEOPLE**

Division of Clinical Leadership in Collaboration with the  
Division of Substance Abuse Services

## Quick Facts

**1** in **3** youth start drinking by the end of Grade 8, of which half report having been drunk (NIAAA, 2011).

Chart 1. Differences in Substances of Use/Misuse between Adolescents and Young Adults



Adolescents differ from young adults in reports about the substances they use and/or misuse. Nearly twice as many young people ages 12-17 received treatment for marijuana use, compared to young adults ages 18-25. The reverse is true involving treatment for prescription drugs. Around one and a half as many young adults ages 18-25 were in treatment for prescription drug use as youth ages 12-17 (NIDA, 2014a).

# Young People

This module addresses substance use in youth and young adults. It includes information for adolescents as well as young adults 18-25 years of age.

## Adolescents

It should not be surprising that substance use in adolescence has become a public health concern. The adolescent brain is primed for risk taking such as experimenting with substances, and because it is still developing, it is more vulnerable to harmful effects (NCASA at Columbia University, 2011). Adolescence is defined as the developmental stage which begins with the pubescent years (around the age of ten) and continues until physical maturation is reached (around the end of the teenage years). Significant developments happen at differing points in time with regard to cognitive, physical, and sexual development as well as an innate appeal toward self-image of one's physical body, the actual body's shape, and functions within society (Free online psychology dictionary, n.d.). These physical, cognitive, and psychological changes in young people are coupled with greater desires for independence, increased experimentation, and engagement in more risk-taking behaviors (Howlett, Williams, & Subramaniam, 2012). Hence, adolescence is considered a period of conflict, especially between youth and parent/caregiver. During adolescence, young people become increasingly aware of how their peers see them and desperately want and try to fit in. Adolescents frequently start to “try on” different identities and looks, which may result in unpleasant episodes with parents/caregivers, in particular (KidsHealth, n.d.). Adolescence is further the critical period for starting to smoke, drink, or use other drugs. Genetics, family history, trauma, mental health and/or behavioral problems place some teens at even greater risk for negative consequences (NCASA at Columbia University, 2011). Drug use compromises the very parts of the brain that would allow youth to “say no” (NIDA, 2014a).

Substance use and/or misuse have become part of the experimentation and/or risky behavior that adolescents engage in, despite ongoing prevention efforts by healthcare practitioners (Howlett et al.,

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**“Drug use compromises the very parts of the brain that would allow youth to say no” (NIDA, 2014a).**

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2012). For example, more than half of the three million new initiators of substance use in 2011 were adolescents (Meyers, Cacciola, Ward, Kaynak, & Woodworth, 2014). In 2012, 52 percent of the 2.8 million new

users were under the age of 18 (NIDA, 2014a). As many as 44 percent of teenagers reported using marijuana at least once within their lifetime, with 36 percent reporting use in the past year, nearly 25 percent reporting use within the past month, and seven percent reporting use 20 or more times within the past month (Feliz, 2014). Research indicates that one of every 11 user of marijuana that is at least 15 years of age becomes dependent on the substance. It has further been shown that there is an inverse relationship between use and perceived risk of harm. Lower marijuana use is associated with a perceived high risk of harm from use (SAMHSA/CBHSQ, 2016). Analyses by ethnic group have shown Hispanic and African-American/Black teens as more likely to report using or misusing prescription substances compared to their White counterparts (27 percent, 29 percent, and 20

percent respectively (Feliz, 2014). In our state, the top three substances of use for young people ages 12-17 admitted to treatment facilities funded by the Tennessee Department of Mental Health and Substance Abuse Services (TDMHSAS) in fiscal year 2015 were marijuana, alcohol, and opioids, respectively (TDMHSAS Office of Research, 2016).

Alcohol continues to be the substance most frequently used by adolescents, followed by marijuana and tobacco. Nearly four in ten high school seniors reported drinking alcohol, about one in four reported using marijuana, and slightly more than 15 percent reported smoking cigarettes in the past month (Community Anti-Drug Coalitions of America [CADCA], 2015; DHHS/OAH, 2015). Young people 12 to 17 years of age that consume alcohol tend to engage in binge drinking (i.e., consume five or more drinks in a row on a single occasion) compared to adults (NIDA, 2014a).

Marijuana remains the most commonly used illicit drug for adolescents, though nearly half of adolescents have used an illicit drug at least once by Grade 12 (Community Anti-Drug Coalitions of America [CADCA], 2015; DHHS/OAH, 2015). The percent of teens who perceive marijuana use as harmful has remained relatively stable from 2009 to 2013. In 2009, 42 percent saw moderate to great risk in trying marijuana once or twice versus 39 percent in 2013. Perceptions of moderate to great risk in 2009 were 74 percent when use was considered regular, compared to 70 percent in 2013. Furthermore, 34 percent of teens surveyed in 2013 said they would be less likely to use the substance if it were legalized, compared to 38 percent in 2012 (Partnership for Drug-Free Kids, 2013).

Findings from the 2014 National Survey on Drug Use and Health (NSDUH) reflected declines in use of certain substances by youth. Decreases in substance use were evident for alcohol, cigarettes, and nonmedical use of prescription pain relievers (CADCA, 2015) which, of course, is encouraging news about youth drug use. However, marijuana use by adolescents remained stable (CADCA, 2015). Moreover, a Partnership Attitude Tracking Study (PATS), conducted by the Partnership for Drug-Free Kids, has indicated an increase in use of over-the-counter (OTC) cough medicines by youth. From 2012 to 2013, teens reported an increase in lifetime (“ever tried”) use of OTC cough medicine to get high, increasing from 12 percent to 15 percent (Feliz, 2014). Additionally, results from the PATS survey confirmed a significant increase in reported lifetime use of synthetic human growth hormone (HGH) among teens. Statistics for 2013 doubled over 2012, with 11 percent of teens in grades 9-12 reporting “ever having used” HGH without a prescription versus five percent the previous year. The findings around performance-enhancing substances have prompted recommendations of tighter regulation and more accurate labeling of “fitness-enhancing” OTC products (Feliz, 2014).

The Partnership for Drug-Free Kids has initiated efforts to deal with the issue of performance-enhancing substance use by young people. In conjunction with Major League Baseball Charities, the organization developed the *Play Healthy* program to give coaches and parents a better understanding of the risks of using performance-enhancing substances. Further, this program equips significant adults in helping youth athletes make safer, healthier decisions. *Play Healthy* features a Web site that educates families on the risks of steroids and performance-enhancing substances. There are also *Play Healthy Awards* to recognize coaches that work with young people as well as student athletes who embody the spirit of teamwork and healthy, drug-free competition (Feliz, 2014).

Per student self-report, heroin use by students in grades 8, 10, and 12 has remained relatively low (NIDA, 2014b). However, three in 100 high school students in the United States have used heroin.



Furthermore, the drug appears to be attracting young, White people in the suburbs (Aleccia, 2014). The heroin of today is more lethal than that of earlier years because it is:

- **Purer** – At least 40 percent pure, with some reports indicating much higher purity rates.
- **Stronger** – A high can be attained merely by smoking or snorting it.
- **More addictive** – Being stronger and purer makes the drug much more addictive (Himmelstein, 2013).

A 2014 Youth Risk Behavior Surveillance (YRBSS) Report indicated that young people in our state were using heroin and shooting up drugs at twice the national average (Wilemon, 2014; CDC, 2014). The percentage of Tennessee young people who reported ever injecting illicit substances was 4.7 percent, compared to 1.7 percent nationwide. The YRBSS monitors six types of health-risk behaviors contributing to the leading causes of disability and death in young people and adults. Alcohol and other substance use as well as tobacco use are among the health risk behaviors that are monitored (CDC, 2014).

Research has shown us that an individual's chance of more serious substance use and addiction increases when there has been drug use early in life (NIDA, 2010). In fact, 90 percent of substance use disorders (SUDs) begin

between the ages of 12 and 20 (Meyers et al., 2014). By the time young people are seniors in high school, almost seven in ten will have tried alcohol, more than one fifth will have used a prescription

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**90 percent of substance use disorders begin between the ages of 12 and 20 (Meyers et al., 2014).**

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drug for a nonmedical purpose, and 50 percent will have taken an illegal drug (Johnston, O'Malley, Miech, Bachman, & Schulenberg, 2015; NIDA, 2014a). Of the young people that begin abusing prescription drugs at age 13 or younger, at least one fourth will develop a substance use disorder (SUD) at some time in their lives (McCabe, West, Morales, Cranford, & Boyd, 2007; NIDA, 2014a). Using substances before age 15 makes it five times more likely that a person will develop an SUD in

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**Using substances before age 15 makes it five times more likely that a person will develop an SUD in later life (Meyers et al., 2014).**

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later life (Meyers et al., 2014).

More than four in ten teens who have used marijuana reported starting use before the age of 15, a fact that is considerably troublesome (Feliz, 2014).

Research estimates show that about 75 percent of adolescents with substance use disorders have co-occurring psychiatric conditions. This fact places adolescents at risk for a wide range of problems such as high-risk sexual behavior (Lichtenstein, Spirito, & Zimmermann, 2010).

Youth tend not to report withdrawal symptoms around drug misuse or use. Instead 12 to 17 year olds typically report getting complaints from other people about their substance use, continuing to use in spite of legal trouble or fights, and hiding their substance use (NIDA, 2014a).

## Screening

Standardized screening tools are available to help clinicians determine an adolescent's level of involvement, if any, in alcohol, tobacco, illicit drugs, and/or nonmedical prescription drug use. When reported, the health care provider can assess severity and either provide an on-site brief intervention or refer the youth to a substance use treatment program (NIDA, 2014a). Screening is conducted to identify adolescents who need a more comprehensive assessment for substance use disorders. This is accomplished by uncovering "red flags," or indicators of serious substance-related problems (SAMHSA/CSAT, 1998).

While 10-15 minutes is the ideal duration of the screening process, efforts should be made to ensure a process lasting no more than 30 minutes. The screening instrument should be simple enough that a wide range of clinicians can administer it. The tool should focus on the severity of the adolescent's substance use (primarily consumption patterns) along with a core group of associated factors such as mental health status, educational functioning, legal problems, and living situation. The content of the screener must be appropriate for a diverse group of clients, including those from a variety of background and cultural experiences as well as for clients of differing ages and experiences (SAMHSA/CSAT, 1998).

This document includes various screening tools in a separate module. Among them is the CRAFFT, a screening instrument that has been validated as appropriate for use with adolescents to screen for substance use. Screening tools are further available through American Academy of Pediatrics (AAP) publications: *Tobacco, Alcohol, and Other Drugs: The Role of the Pediatrician in Prevention, Identification, and Management of Substance Abuse*. In addition, the *Alcohol Screening and Brief Intervention for Youth: A Practitioner's Guide*, available through the National Institute on Alcohol Abuse and Alcoholism (NIAAA), provides information on identifying adolescents at high risk for alcohol use (2011). A copy of the latter resource can be downloaded from <http://pubs.niaaa.nih.gov/publications/Practitioner/YouthGuide/YouthGuide.pdf>.

The American Academy of Pediatrics has recommended that health care providers routinely screen all adolescents for substance use as part of preventive care. Because adherence to the recommendation is low, Harris et al. (2012) conducted a quasi-experimental, asynchronous study to test the efficacy of computer-facilitated screening along with brief advice in reducing substance use among adolescents. Screening along with an educational component was provided before the physician office visit. Provider advice was supplied during the visit. Results revealed this strategy as a promising practice in reducing adolescent substance use (Harris et al., 2012).

Schools are a logical location to use screenings and implement SBIRT- (Screening, Brief Intervention, and Referral to Treatment-) type protocols. If the school has a School-Based Health Center (SBHC), proactive screening of large numbers of adolescents for alcohol and other drug (AOD) risks, AOD use, and substance use disorders can take place during routine appointments and care. Many schools will not have a SBHC, but pilot studies have demonstrated how incorporating educational-SBIRT programs through an AOD counselor from a local treatment provider can lead to similar results as found for schools with SBHCs. Of students randomly approached to participate, 100 percent accepted screening and 42 percent reported substance use. Only 28 percent

reported substance use when provided anonymous surveys in non-participating schools. Moreover, 99 percent of the positive screeners voluntarily accepted one motivational counseling session, with 68 percent returning for additional sessions. All sessions were held outside of academic class times (Meyer et al., 2014).

## Prevention

Substance use disorders (SUDs) in adolescents must be treated in the same way as other chronic illnesses. SUDs have biological, behavioral, and social components and, like other chronic medical conditions, are best managed with the appropriate combination of clinically-proven approaches that address prevention and early intervention, as well as treatment and continuing care. Prevention and early intervention are especially helpful when adolescents are engaged in emerging “risky” substance use behaviors (Meyers et al., 2014).

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Genetic factors and life stressors can influence adolescents’ use of substances. However, parents and other caregivers can still play a critical preventative role. Research has shown that strong positive connections with parents can help adolescents stay drug free. Moreover, parents should monitor the activities of their adolescents and keep the channels of communication open. Other protective factors include positive

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**Studies have shown that teens with parents and/or teachers who talk with them regularly about the dangers of substance use are 42 percent less likely to use substances than teens with parents and/or teachers that don’t communicate with them (DrugandAlcoholAbuse.com, n.d.).**

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connections with other family members, school, religion, reduced access to illicit substances in the home, and having parents present in the home at key times of the day (DHHS/OAH, 2015). Studies have shown that teens with parents and/or teachers who talk with them regularly about the dangers of substance use

are 42 percent less likely to use substances than teens with parents and/or teachers that don’t communicate with them (DrugandAlcoholAbuse.com, n.d.).

An NIAAA (2013) publication promulgates the value of parents and parenting in preventing substance use. It deals specifically with the prevention of alcohol use, but has significant implications for prevention involving other substance use. This document emphasizes the fact that adolescents listen to their parents about issues such as substance use, particularly if the messages are conveyed with authority and consistently. While no more than one in four teenagers thinks their parents should have a say about what they should wear or the type of music they

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**Youth who know the opinions of their parents on the issue of substance use are more likely to fall in line with the expectations of their parents (NIAAA, 2013).**

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should listen to, around four in five believe that parents should have a say whether they engage in substance use. It is recommended that parents talk with their youth early and often, in developmentally appropriate ways. Youth who know the opinions of their parents on the issue of substance use are more likely to fall in line with the expectations of their parents.

The publication provides actions parents can take to minimize the likelihood of their youth using substances. Among them are:

- Be aware of the laws in our state about providing substances to one's own children.
- Be consistent in setting expectations and enforcing rules with the young person.
- Be involved in the lives of your young person.
- Conduct open, respectful communication with youth and explain boundaries and expectations.
- Establish policies regarding substance use early on.
- Never provide substances to someone else's young person.
- Work in and with the community to promote dialogue about substance use and the creation and implementation of action steps to address the issue.
- Work with other parents to monitor where youth are gathering and what they are doing (NIAAA, 2013).

In addition, the NIAAA publication discusses Baumrind's parenting styles and which works best in preventing youth substance use. Baumrind says that the way parents interact with their children/youth tends to fall into one of the following categories:

- **Authoritarian** – These parents tend to exert high control and discipline, coupled with low warmth and responsiveness. For example, they respond to poor grades through punishment but let improved or good grades go unnoticed.
- **Permissive** – Parents in this category typically exert low control and discipline with high warmth and responsiveness. These parents will accept any grades and fail to correct behaviors that may lead to poor grades.
- **Neglectful** – These parents exert low control and discipline in conjunction with low warmth and responsiveness. For example, they would not show any interest in their youth's school performance.

- **Authoritative**— Parents in this category tend to exert high control and discipline as well as high warmth and responsiveness. They would offer praise for good grades and use thoughtful guidance and discipline to help improve poor grades.

The literature continues to validate that young people reared in homes with authoritative parents tend to fare better than their peers, regardless the outcome of focus (NIDA, 2015). These findings

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are explained, in part, by the fact that authoritative parents use approaches to problem solving and emotional expression that help protect their youth against the psychological dysfunction that often precedes substance use/misuse.

Research supported by NIDA further supports the important role of parents in preventing their youth from starting to use substances (NIDA, 2015). The Child and Family Center at the University of Oregon produced a publication highlighting parenting skills that are critical in preventing the initiation and progression of substance use among young people. The publication also provides access to video clips that can help parents practice positive parenting skills. The publication can be accessed at [https://d14rmgtrwzf5a.cloudfront.net/sites/default/files/familycheckup\\_8\\_15.pdf](https://d14rmgtrwzf5a.cloudfront.net/sites/default/files/familycheckup_8_15.pdf).

Parents, on the other hand, are failing to have these crucial conversations with their youth. A SAMHSA report indicated that more than 20 percent of parents of young people ages 12-17 think what they say has little to no influence on whether or not their youth will engage in substance use, including alcohol and tobacco. The report also showed that 10 percent of parents said they did not talk to their adolescents about the dangers of using alcohol, tobacco, or other substances. Ironically two thirds of the parents who had not talked with their youth thought they could influence whether their youth used substances if they had the conversations with them (Science Daily, 2013b).

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Parents are failing to have these crucial conversations with their youth (Science Daily, 2013b).

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Findings are mixed about whether parents should talk to their youth about their past substance use. One of the first studies to examine this issue (conducted by Kam and Middleton) found that youth whose parents did not disclose substance use but delivered a strong anti-drug message, were more likely to exhibit anti-drug attitudes (Science Daily, 2013a). However, a Partnership for Drug-Free Kids (2014) brochure suggests that parents use their judgment. However, the key words are “being developmentally appropriate” in your conversation. Former SAMHSA Administrator Pamela Hyde has expressed that parents need to initiate age-appropriate conversations about substance use with their children at all stages of their development in order to help ensure that their youth make the right decisions (Science Daily, 2013b).

Teenagers report that the greatest deterrent to marijuana use is getting into trouble with the law, followed by upsetting parents (Partnership for Drug-Free Kids, 2013). Hence, the evidence is

overwhelming that parents continue to be an important factor in whether or not young people engage in substance use.

## Treatment Issues

Research suggests that providers focus more strategically on targeted intervention points because the key risk periods for substance use occur during major transitions in young people's lives. The first significant transition for youth takes place when they leave the security of the family to enter school for the first time. Another major transition is when the youth move from elementary school to middle school. It is this transition where they typically experience new academic and social situations that include learning to interact and get along with a wider group of peers. It is also at this

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Research suggests that providers focus more strategically on targeted intervention points because the key risk periods for substance use occur during major transitions in young people's lives (Howlett et al., 2012).

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transition point that the youth, who are in early adolescence, are likely to encounter drugs for the first time. The next pivotal transition occurs when young people enter high school. Now there are additional educational, social, and emotional, challenges to face. Simultaneously, the youth may be exposed to greater availability of substances, substance users, and social

activities where substances involving substances. Of course, these challenges may increase the risk that the youth will use and/or misuse substances. Graduating high school and leaving home for college, entering the workforce, or just being on their own for the first time is another critical transition point that may dramatically increase the risk of substance use for young people (Howlett et al., 2012; NIDA, 2010). Thus, parents/caregivers as well as treatment providers need to be aware of these risk factors so that appropriate protective factors can be put in place and/or incorporated into treatment planning and implementation (Howlett et al., 2012).

Research suggests programs such as AA and NA hold promise for adolescents, especially as an adjunct service. They are easily accessible at no cost and provide flexible support at times of high relapse risk. There are still questions related to the developmental level of adolescents for AA or similar program participation and existing research is based on a few small studies. Nevertheless incorporating 12-step concepts in adolescent treatment programs is encouraged (Kelly & Myers, 2007).

Current research says that we need to do a better job of providing substance use treatment for adolescents (Meyers et al., 2014). Certainly clinicians should guide and warn adolescents about safe management of their medications as well as safe storage (Chambers, Lopez, & Ernst, 2013). Since some studies have observed that parents or other relatives actually drive young people to AA and NA meetings, it may also be beneficial to include these supports in twelve-step facilitation sessions, thereby bolstering the youth's participation (Kelly & Myers, 2007).

Special care has to be taken in treating adolescents for opioid use with opioid substitution therapy as with pregnant women. They cannot be viewed simply as 'little adults'. Further, there is evidence of a high rate of psychiatric disorders in adolescents that have an addiction to opioids. Those who seek



treatment for opiate use disorder tend to have greater impairment in their substance use, depressive symptoms, and injection drug use-related HIV-risk behaviors than adolescents who seek treatment for alcohol or cannabis use (Chalk, Alanis-Hirsch, Woodworth, Kemp, & McLellan, 2013).

Compared to substance use, only a small percentage of young people actually receive substance use treatment. Contributing to this treatment gap is the fact that adolescents who use/misuse substances tend not to perceive the need for treatment. Moreover, their parents frequently underestimate the extent of their use/misuse (Chambers et al., 2013). Youth ages 12 to 17 years are more likely to receive treatment for marijuana use than for alcohol use, unlike adults (NIDA, 2014a).

Young people do not receive the treatment they need for substance use disorders. Many youth simply feel they do not need help because they do not believe that they have a problem involving substance use (Chambers et al., 2013; NIDA, 2014a). The largest percentage of adolescents aged 12 to 17 years admitted to publicly funded substance use treatment facilities are referred from the juvenile justice system (NIDA, 2014a).

Teenagers in need of substance use treatment services additionally should be connected to wraparound services (SAMHSA, 2014a). The use of substances in adolescence affects the youth's

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Many youth simply feel they do not need help because they do not believe that they have a problem involving substance use (Chambers et al., 2013, e.g.).

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school performance, physical health, family interactions, and relationships in general. Hence youth seeking substance use treatment services will further benefit from help that gets them back on track in school, improves their interactions with friends and family members, addresses their physical health needs, and generally improves their ability to get along with others.

## Level of Care.

Prior to determining the appropriate evidence-based practice to use with adolescents in the treatment of their substance use/misuse, most providers will utilize the expert consensus-driven Patient Placement Criteria (PPC) developed by the American Society of Addiction Medicine (ASAM) to determine levels of treatment care. The levels of care options are as follow:

1. Early intervention services;
2. Outpatient treatment; services;
3. Intensive outpatient services;
4. Residential/inpatient treatment services; and
5. Medically managed intensive inpatient (Howlett et al., 2012).



## **Psychosocial Treatments.**

### ***Evidence-Based Approaches.***

Evidence-based approaches to treatment for substance use in adolescents capture methods or interventions that have been scientifically tested and found to be effective. Among the evidence-based programs (EBPs) that have been found to be effective in reducing substance use/misuse among teenagers include:

- Adolescent Community Reinforcement Approach
- Matrix Program
- Motivational Enhancement Therapy (MET)
- Multidimensional Family Therapy (MDFT)
- Multisystemic Therapy (MST)
- Parenting with Love and Limits (PLL)
- Phoenix House Academy (1<sup>st</sup> opened in 1983)
- Relapse Prevention Therapy
- Residential Student Assistance Program (RSAP)
- Seeking Safety
- Seven Challenges
- Adolescent Portable Therapy
- Teen Intervene
- Trauma-Informed CBT
- Brief Strategic Family Therapy (BSFT)
- Cognitive Behavioral Therapy (CBT)
- Dialectical Behavior Therapy

- Family Behavior Therapy
- Family Empowerment Intervention (FEI)
- Family Support Network
- Functional Family Therapy (FFT) (Meyer et al., 2014).

### *Family-Based Approaches.*

Research has shown that family-based therapies work well for adolescent substance use. Additionally, there are a handful of combination therapies that have shown promise with young people who use/misuse substances (Chambers et al., 2013; Howlett et al., 2012). These therapies take an indirect approach to the treatment of substance use by improving family functioning and a direct approach by affecting each system in which the youth functions such as school, family, and the type of activities the young person participates in outside of the normal school day (Chambers et al., 2013). Several more familiar approaches are described below.

***Multisystemic therapy*** (MST) is an evidence-based, family-based therapy that has been shown to work well for adolescent substance use. The therapy decreases violent behaviors, criminal arrests, and the number of days in out-of-home placements in addition to decreasing the youth's substance use. MST is an intensive, individualized, home-based treatment program that focuses on the social network factors that contribute to antisocial behavior. In conjunction with drug court, it has been shown that MST may enhance substance use outcomes for marijuana and alcohol (Chambers et al., 2013).

Another successful, evidence-based, family-based therapy is ***multidimensional family therapy*** (MDFT). This approach targets four domains: 1) the young person alone and with family/peer group; 2) The parent/caregiver alone and within the family context; 3) family functioning; and 4) Interactions between family members and key social systems. MDFT has been shown to reduce substance use and improve family functioning and school performance in polydrug users as well as in alcohol-only or marijuana-only users. Moreover, MDFT is linked to reductions in substance use for up to one year following treatment for young people involved in the juvenile justice system and high-risk early initiators. There is further emerging evidence that MDFT may be particularly useful in treating individuals with high frequency of use and severity and persons with comorbidity (Chambers et al., 2013).

***Brief Strategic Family Therapy*** (BSFT) has also been shown to have proven efficacy in adolescent substance use treatment. BSFT is further linked with improving family functioning, conduct problems and delinquency and promoting high levels of engagement of family members (Chambers et al., 2013).

A family-based approach involving both the adolescent and their families in sessions is the comprehensive ***Adolescent Community Reinforcement Approach*** (A-CRA). This approach

seeks to increase family, educational, vocational, and social reinforcers of the adolescent to encourage prosocial activities and support recovery. It is typically delivered in conjunction with **Assertive Continuing Care** (ACC), a home-based intervention that adds case management to A-CRA for the duration of the 12-14 week treatment. This combination helps to maintain the progress achieved during active treatment following discharge from outpatient or residential treatment (Howlett et al., 2012).

The Adolescent Community Reinforcement Approach (A-CRA) recognizes that recovery has to be fun as well as developmentally appropriate if it is to become a real possibility for young people. It focuses on skill building that teaches how to have fun without the use of alcohol or other substances (Meyers et al., 2014). A-CRA is designed for young people between the ages of 12 and 22 years. It is an outpatient, behavioral intervention for utilization after completion of a residential care program for substance use. The goal of the intervention is to encourage recovery and abstinence from substance use, as well as to enhance linkage to, and participation in, continuing care services (Child Trends, 2008).

The Tennessee Department of Mental Health and Substance Abuse Services (TDMHSAS) received a Treatment and Recovery for Youth (TRY) grant from the Substance Abuse and Mental Health Services Administration (SAMHSA) to improve substance use treatment and recovery services through August 2017. This project will service youth in Madison and Maury counties and employ A-CRA, along with Assertive Continuing Care (ACC), as the primary interventions (L. McCorkle, personal communication, February 21, 2014).

ACC is a continuing care intervention specifically designed for adolescents after a period of residential treatment. Adoption of a strong continuing care intervention is particularly relevant in our state because of our adoption of the use of ASAM placement criteria. ASAM requires that those who have the most severe problems be placed in residential treatment, outlining five levels of substance use treatment services for youth. These services include: 1) early intervention; 2) outpatient treatment; 3) intensive outpatient treatment; 4) medically-monitored inpatient treatment; and 5) medically managed intensive inpatient treatment. Thus, these adolescents are the most severely impaired and at greatest risk for relapse following discharge. Delivered primarily through home visits, ACC clinicians are assertive in their attempts to engage youth in participation of continuing care. A-CRA procedures are incorporated, including functional analyses of substance use and prosocial behaviors, encouragement of prosocial behaviors, and other relapse prevention skill training tools (Godley, Godley, Karvinen, Slown, & Wright, 2006).

Researchers evaluated the impact of ACC with an A-CRA component on adolescents in Central Illinois following their discharge from residential treatment. A control group received usual continuing care. Results indicated that adolescents in the ACC/A-CRA condition experienced significantly better adherence to continuing care criteria, significantly greater continuing care linkage and retention, and longer abstinence from marijuana than adolescents receiving usual care (Godley, Godley, Dennis, Funk, & Passetti, 2007).

### *Behavioral Approaches.*

Behavioral therapies have also been identified as effective treatments, whether treatment is delivered in outpatient, inpatient, or residential settings. A few of the more prominent approaches are mentioned below.

***Cognitive Behavioral Therapy*** (CBT) has been used successfully in adolescent substance use treatment. It is a manual-guided approach where the therapist assists the young person in acquiring cognitive skills, such as identifying/addressing distorted thought patterns. This strategy is combined with behavioral strategies, e.g., anger management, dealing with substance cravings, to address the substance use (Howlett et al., 2012).

Another efficacious strategy in adolescent substance use treatment is ***contingency management*** (CM). Based on the principle of operant conditioning, consequences are used to reduce substance use. The ultimate goal of CM is to weaken the influence of the reinforcement provided by the substance use. Positive reinforcement is typically delivered by the therapist but evidence is emerging that supports successful delivery of CM by parents as well as web-based delivery with adolescents (Howlett et al., 2012).

A successful combined treatment package for adolescent substance use treatment is ***motivational enhancement therapy*** (MET)/***cognitive-behavioral therapy*** (CBT). Initial sessions employ MET in an effort to elicit intrinsic motivation to change substance use/misuse by resolving the adolescent's ambivalence. The CBT component follows, focusing on helping the adolescent to become abstinent (Chambers et al., 2013). Based on the notion that thoughts cause behaviors and determine the way in which people perceive, interpret, and assign meaning to their environment, the CBT component encourages adolescents to examine the pros and cons of their use/use and to create goals that will help them achieve a healthier lifestyle (Winters, Botzet, & Fahnhors, 2011).

### **Twelve-Step Programs.**

These are self-help programs such as Alcoholics Anonymous (AA), Narcotics Anonymous (NA), and Cocaine Anonymous (CA). They operate within the context of reciprocal support and have been employed successfully with adolescents. Organized around the basic tenets of AA, these programs are a commonly used strategy in outpatient and inpatient treatment programs and may be provided as stand-alone approaches. Statistics show that only a very small percentage (around two percent) of the AA membership in the United States and Canada is younger than 21 years of age (Winters et al., 2011).

### **Continuing Care.**

#### ***Step-Down Opportunities.***

The literature supports the benefits of step-down services for adolescents who have completed substance use treatment before they seek to resume their regular academic program (Meyers et al., 2014). As a result, some states now operate “recovery high schools” (also referenced as sober

schools) for students diagnosed with a substance use disorder (SUD). A good number of recovery high schools require treatment completion for admission while others allow students to receive treatment during their enrollment. Recovery high schools were designed to mitigate the factors that often lead to relapse for the adolescent with SUD. Thus, the schools target multiple life-health domains; provide cognitive behavior and problem solving skill training; focus on relapse prevention; encourage family involvement; increase prosocial leisure opportunities; offer the necessary intensity and duration of contact; are sensitive to the socioeconomic and cultural realities of the youth; and encourage adherence to a wide range of social services for additional support. Students in recovery schools tend to be White, with about half from two-parent homes, and have a broad and complex range of mental health issues, substance use patterns, traumatic experiences, criminal justice involvement, and educational backgrounds. Referral is often made by treatment providers. Participation in a mutual-support group like AA is generally a requirement as well (Moberg & Finch, 2008).

Enrollment in recovery high schools is similar to any other school, requiring transcripts and all the typical paperwork. However, staff are further interested in where the young person is in his/her recovery and how committed he or she is in becoming sober. In some recovery high schools, students are asked to take responsibility for themselves and their school as part of recovery, so they engage in activities like preparing their own lunch, cleaning up after themselves following lunch, and performing custodial duties such as emptying trash, cleaning classrooms and bathrooms. Classes are small and the curriculum is flexible, designed to assist the student with what he or she missed while using or in treatment. Some recovery high schools help students find jobs (Forester, 2011). Research shows that youth who attend a recovery school for at least three months following substance use treatment maintain their sobriety eight times longer, on average, than before attending such a school (Meyers et al., 2014). However, these schools struggle to receive and/or maintain adequate funding (Forester, 2011). Entities interested in this movement can start with the Association of Recovery Schools Web site located at <http://www.recoveryschools.org/>.

## *Other Treatment Approaches.*

### *Addiction Medications.*

A variety of medications have been approved by the Food and Drug Administration (FDA) to increase abstinence from certain substances. However, most of the FDA-approved medications cannot be used with young people in the treatment of substance use. **Only buprenorphine has been approved for use in youth 16 years of age and older.** The evidence of efficacy in youth is not yet available (Howlett, 2012; Meyer et al., 2014).

### *Considerations for Adolescents with Opioid Use Disorders (OUDs).*

There is evidence that opioid use has increased dramatically among young people in recent years. However, treatments for adolescents using opioids should not simply consider them as “little adults”, but should instead focus on the fact that young people are a unique population with characteristic needs. This focus is particularly critical if considering medication-assisted treatments (MATs) for adolescents using opioids. Several factors must be taken into account in determining

proper medication dosages, including the young person's age, medical status, individual substance use history, and situational factors. Moreover, careful psychopharmacological management is required if the adolescent is also taking psychoactive medications for a co-occurring psychiatric disorder. If the duration of the adolescent's opioid use is short, withdrawal or opioid replacement detoxification with intensive counseling has been recommended as more appropriate (Chalk et al., 2013)

It has been recommended that substance use treatment programs adopt Early Detection and Intervention for the Prevention of Psychosis Program (EDIPPP)-type programs for their adolescent clients. EDIPPP trains the educational and medical community to recognize warning signs of psychosis and quickly refer adolescents for screening, early intervention, and treatment. Early results of these programs have demonstrated reduced rates of psychotic episodes and hospitalizations as well as improved attendance at school and job sites (Meyers et al., 2014).

### *Treatment Summary.*

Lipsey, Tanner-Smith, & Wilson (2010) observed overall positive treatment effects in adolescents for all treatment models, but the best outcomes were associated with family therapies, CBT, and MET/CBT. Comprehensive reviews of treatments for adolescent substance use/misuse can be found in Howell et al. (2012), Lipsey et al. (2010), and Winters et al. (2011), for example.

Expert consensus procedure was used to identify essential elements of effective substance use treatment for adolescents in an article by Drug Strategies (2003). The following elements were identified:

1. Screening and comprehensive assessment of the young person and the family.
2. Comprehensive services which not only address the adolescent's substance use/misuse but any mental health, medical, familial, or educational issues as well.
3. Involvement of the family, especially parents/caregivers.
4. Offering of developmentally appropriate therapies and services to address the different capabilities and needs of the youth.
5. Strategies that engage and keep adolescents in treatment.
6. Qualified staff that have the appropriate knowledge and experience working with substance users who are young and their families.
7. Programs that address gender and cultural gender differences.
8. Programs that plan for care after the formal treatment program has been completed.

9. Programs that measure outcomes/program success.

A small number of studies (e.g., Brannigan, Schackman, Falco, & Millman, 2004, and Mark et al., 2008) has examined select programs and found very few that contained all elements. Thus, the extent to which community substance use treatment programs for adolescents include these core elements is not yet clear (Winters et al., 2011).

## **Barriers and Facilitators to Effective Residential Treatment: An “Adolescent” Perspective**

Research says many of the adolescents that enter substance use treatment programs do not stay through completion. A small study by Gogel, Cavaleri, Gardin II, & Wisdom (2011) provided a glimpse of perceived treatment barriers and facilitators for adolescents based on results from semi-structured interviews. The findings are shown below:

### Barriers

- Treatment program is comprised of mixed resident population. The residents have different addictions and different reasons for being in the treatment program.
- Their past experiences were very much on their minds, despite being in a new and different environment.
- Too much focus on program rules that interferes with treatment work.
- Time to work with staff was too brief and/or repeated staff turnover made it difficult to open up and connect.
- Staff's message to resident is 'I'm here to get a paycheck' (Gogel, Cavaleri, Gardin II, & Wisdom, 2011).

### Facilitators

- Resident feels comfortable with staff because they “get” them or evoke “calm”.
- Having their parents/caregivers involved in the program (Gogel et al., 2011).

Only around 10 percent of adolescents who need treatment for a substance use disorder (SUD) actually receive treatment (NIDA, 2014a).

## **Recovery Support Services**

Relapse is always a possibility for adolescents with a substance use disorder (SUD). However, relapse should not be handled punitively and it should not be used an opportunity to remind the young person that he/she failed. Rather relapse should become an opportunity to re-engage the youth in treatment or examine additional and/or different treatment options (NIDA, 2014a).



Recovery is a **PROCESS**. For adolescents, recovery will be strengthened by support from non-drug-using friends, the school, and family members (NIDA, 2014a). Social support is critical.

## Special Topic

### Underage Drinking.

Underage drinking contributes to a broad range of costly social and health problems, including interpersonal violence (e.g., assaults, rapes, homicides); motor vehicle crashes; alcohol and drug poisoning; unintentional injuries such as falls, drowning, and burns; suicide; brain impairment; alcohol dependence; risky sexual activity; and academic problems. Noticeable reductions have been seen, particularly among younger age groups, but there is still cause for concern. Young people continue to engage in binge drinking at levels that increase their risk of injury or death and there is an erosion of the traditional gap in binge drinking between underage females and males. The gap has nearly disappeared with the drinking practices of females converging with those of males (Report to Congress, 2013).

Alcohol continued to be the most widely used substance of use among young people in our country, with a higher proportion using alcohol than tobacco or other substances. The most common underage consumption pattern was binge drinking. Of course, this pattern places binge drinkers and those around them at substantially greater risk for negative consequences. Binge rates tend to increase rapidly with age. It should be noted that very young adolescents (i.e., ages 12 to 15) who binge drink reach binge-drinking blood alcohol concentrations (BACs) with fewer drinks than do older adolescents (Report to Congress, 2013).

Tracking beverage preferences has shown distilled spirits are becoming more popular among adolescents and challenging beer as the beverage most likely to be consumed by underage drinkers. This finding was especially relevant for youth that reported engaging in binge drinking (Report to Congress, 2013).

There appears to be racial and ethnic differences in youth drinking. White youth ages 12 to 20 years are more likely to report binge drinking and current alcohol use than any other racial or ethnic group. The lowest rates are reflected by Black and Asian youth. In contrast, data on prevalence of drinking before age 13 reflects higher rates for Black and Hispanic youth than for White youth. Readers are cautioned to view these racial and ethnic differences with caution but encouraged to consider race and ethnicity in planning underage drinking countermeasures in specific communities (Report to Congress, 2013).

Data indicate that youth tend to consume more drinks when in the company of two or more other people than when drinking with a single person or alone. Yet, drinking in the presence of others is most common setting for young drinkers. More than four fifths who had consumed alcohol within the past month reported doing so when at least two other individuals were present. Moreover, private residences appear to be the most common setting for alcohol consumption by young people. Most underage drinkers reported drinking either in their own home or someone else's. Other popular settings for underage drinking include a restaurant, bar, or club; at a park, on a beach, or in a parking lot; or in a car or other vehicle (Report to Congress, 2013).

Research has shown that early initiation of alcohol and/or other drugs is a critical indicator of future substance use. Therefore, delaying the onset of alcohol initiation can significantly enhance later health. Peak years of alcohol initiation appear to be between grades 7 and 11, but ten percent of nine and ten year olds have already started drinking. In fact, around 20 percent of underage drinkers begin consumption before they reach 13 years of age (Report to Congress, 2013).

A group of underage drinkers typically missing from research and alcohol use discussions are children under the age of 12 years. The three major ongoing Federally sponsored national surveys in the United States do not collect data on children in this age range. The National Survey on Drug Use and Health (NSDUH) includes children 12 years of age but none younger than 12 years. The yearly Monitoring for the Future (MTF) survey and the Youth Risk Behavior Survey (YRBS) that is administered every two years omits children age 12 and younger. However, a substantial number of children ages 12 and below have had some degree of exposure to alcohol. Thus, the alcohol burden to individuals of all ages should be known so longer-term consequences of early use can be addressed (Donovan, 2013).

A 2007 study by Donovan showed that alcohol use rates increase with age and double between grades 4 and 6. The largest jump in use rates occurs between grades 5 and 6. Boys were more likely to have used alcohol than girls across each grade level. African American children were almost as likely as White and Hispanic children to have used alcohol (Donovan, 2013).

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## Young Adults

The life stage “young adults” (also referenced as ‘emerging adults’) typically includes young people at least 18 years of age through the early to mid-20’s. Some references include ages 18-24 years as the range for young adulthood (Bergman, Greene, Slaymaker, Hoepfner, & Kelly, 2014; Milam et al., 2013). There are references that show young adulthood as spanning the ages of approximately 18-26 years (IOM/NRC, 2015). The Substance Abuse and Mental Health Services Administration (SAMHSA) most commonly uses 18-25 years of age in defining young adults (SAMHSA/CBHSQ,

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Young adults represent a large segment of the SUD treatment population, comprising the second largest proportion of treatment admissions (Bergman et al., 2014).

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2014). Among distinctions for this age group include the highest rates of co-occurring substance use and psychiatric disorders. Young adults represent a large segment of the SUD treatment population, comprising the second largest proportion of treatment admissions (Bergman et al., 2014).

Nevertheless, young adulthood is both a significant as well as pivotal time of life. It is during this time that young men and women typically complete their education, start working, develop relationships, and pursue other endeavors that help set them on the path to a healthy and productive adult life. Unfortunately many young adults in our country are experiencing great difficulty accomplishing these transitions. The bewildering pace of change in modern life has also confounded the traditional pathways to marriage, parenting, and other hallmarks of independent adulthood. Conversations with today’s young adults are likely to evoke observations about the uncertainties and stresses they confront (FIFCFS, 2014; IOM/NRC, 2015).

Young adulthood is an age of exploration. Young adults move out of their parents’ houses and into dorms or other abodes with their peers. They form serious relationships, explore their own identities, and contemplate how they fit in the world. The roles of parents diminish and peer influences gain greater strength. Young adults are on their own for the first time and free to make their own decisions, including the decision about whether to use substances (NIAAA, 2006).

In 2014, the Substance Abuse and Mental Health Services Administration (SAMHSA) released a report showing how prevalent substance use was in the lives of many young adults ages 18 to 25 years. The data revealed that thousands of young adults use illicit substances for the first time every day. Included were 1,200 first uses of cocaine; 1,561 first uses of hallucinogens; 258 first uses of heroin; 566 first uses of inhalants; 2,470 first uses of marijuana; 174 first uses of methamphetamines; 1,754 first time nonmedical uses of prescription pain opioids; and 850 first uses of stimulants (SAMHSA/CBHSQ, 2014).

A number of factors contribute to substance use by young adults, with a wealth of research pinpointing factors contributing to their alcohol use. Gender plays a role, with young men more likely drinking in ways that are harmful than women. Native Americans and Whites tend to drink more than Asians and Blacks/African Americans; drinking rates for Hispanics tend to fall in the middle. The college environment in and of itself does not necessarily lead to more drinking by college students versus nonstudents. However, the college environment may provide more situations where drinking might be encouraged such as parties on the weekend, so college students may tend to drink in greater quantities than nonstudents. (Some research reports college students

dropping this practice before it becomes a long-term problem compared to nonstudents.) Employment may influence current drinking but discourage heavy drinking (i.e., drinking five or more drinks). Being in the military also tends to influence heavy drinking in young adults, along with peers. Getting married and/or becoming a parent tends to be related to lower alcohol use (NIAA, 2006).

Personality factors influence drinking behaviors too. Sensation-seeking, impulsivity, and risk taking tend to be linked to nonconformity and deviant behavior, both of which are predictors of heavy drinking and other related problems. Moreover, feeling invincible affects drinking behavior. They do not see themselves as vulnerable to negative consequences such as accidents or developing dependence on alcohol. Mood disorders may prompt increased alcohol use, as supported through a study by Cooper et al. The researchers found that drinking to cope with negative feelings was as good predictor of heavy drinking and drinking problems in young adults (NIAA, 2006).

Marijuana use has been on the rise among young adults. SAMHSA's Director of the Office of Applied Studies has acknowledged higher use rates in the 18-25-year-old age group. He further mentioned that this age group has not been on SAMHSA's radar and that efforts must be undertaken to intervene before they need treatment or go to jail (Medical News Today, 2011). The rate of current illicit drug use for 18-25 year olds continued to be driven by marijuana use in 2013 (SAMHSA/CBHSQ, 2014).

Prescription drug use rates for young adults showed a decline between 2009 and 2012, from 6.4 percent to 5.3 percent (Partnership for Drug-Free Kids, 2013).

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Marijuana use has been on the rise among young adults, a group that has not been on SAMHSA's radar (Medical News Today, 2011).

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Approximately 764,000 young adults received treatment in 2014. Of those, nearly 32 percent received treatment for the use of both alcohol and illicit drugs, 33 percent received treatment for illicit drug use but not alcohol, and 24 percent received treatment for alcohol use but not for use of illicit drugs (Han, Hedden, Lipari, Copello, & Kroutil, 2015).

Similar to older adults, young adults 18-25 years of age tend not to seek treatment for their SUD and those who do delay their treatment decision. A study of Florida young adults (18-23 years of age), e.g., found that the majority (68 percent) with a history of SUD reported never seeking help in the form of treatment. Of that group, 11 percent reported delays in seeking treatment of one to seven years. Inconsistent with previous studies, young adults with later SUD onset were the less likely to seek treatment. It was further determined that a comorbid post-traumatic stress disorder (PTSD) played a significant role in help-seeking behavior (Gayman, Cuddeback, & Morrissey, 2011). SAMHSA Administrator Pamela Hyde acknowledged that far too many young adults allow substance use to jeopardize their wellbeing health, and futures. She indicated that more must be done to ensure that effective prevention and treatment programs are available to assist young adults in making right choices (SAMHSA Press Announcement, 2014).

## Prevention

Even though young adults are typically on their own and not around their parents often, parents still play a major protective role in drinking behavior (IOM/NRC, 2015; NIAAA, 2006). Research has

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shown that the example set by parents with their own drinking affects their children's drinking throughout their lifespan. The young adult tends to model his or her behavior after the parent's patterns of consumption (NIAAA, 2006).

Establishing policies to reduce overall alcohol intake or rates of high-risk drinking has been identified as a positive prevention strategy for young adults that consume alcohol. They tend to be control policies that target either the drinking behavior of the population as a whole or young people under the legal drinking age of 21 years. Colleges, for example may establish alcohol-free campuses or residences, prohibit self-service of alcohol at campus events, ban marketing/sales of alcohol on campus, and prohibit beer kegs on campus. It should be noted that these policies may have less impact on students who reside off campus. Similar strategies can be used to prevent alcohol problems among military personnel (NIAAA, 2006).

Many young adults are college students and underage and harmful drinking remain significant issues on campuses across the country, despite the many collective efforts to address them. Therefore, the National Institute on Alcohol Abuse and Alcoholism (NIAAA, 2015) developed a *CollegeAIM* guide, along with a Web site, to assist higher education personnel in choosing wisely among the many potential interventions to address drinking issues of college students. *CollegeAIM* is designed to:

- Identify strategies most likely to lead to reductions in drinking and its harmful consequences;
- Help colleges compare their current strategies with other options;
- Locate new, research-based strategies for consideration; and
- Select a combination of approaches that will meet the unique needs of the students and the campuses.

*CollegeAIM* can be accessed from [www.CollegeDrinkingPrevention.gov/CollegeAIM](http://www.CollegeDrinkingPrevention.gov/CollegeAIM).

As with adolescents, physicians should pay particular attention to education, screening, and early intervention for young adults. Such action can prevent addiction and other health and social consequences. Among the very useful resources for medical personnel is "*Identifying and Responding to Substance Use among Adolescents and Young Adults: A Compendium of Resources for Medical Practice*". This document can be downloaded from <http://www.abam.net/wp-content/uploads/2015/07/ABAMF-Compendium-Final.pdf>.

Several other strategies have been employed to reduce the level of alcohol use among young adults. Raising the price of alcohol is one such strategy. Research has shown that higher prices may discourage drinkers from increasing the quantity and frequency of their alcohol use. Another

strategy targets reductions in traffic crashes associated with positive testing for alcohol. About half of the drivers ages 21-24 in car crashes met these criteria. Therefore, a number of states raised the minimum legal drinking age (MLDA) to 21 years from 18. Research findings tend to show less alcohol consumption after high school in states where the MLDA was raised to 21 years. Additionally, states can lower the legal limit for allowable blood alcohol content (BAC) of drivers. The standard BAC in this country is 0.08 for adult drivers, including young adults, but 0.02 for young people under the age of 21. In states that have lowered the BAC to 0.02 percent, there has been a 19 percent reduction in drinking driving and a 20 percent reduction in fatal traffic crashes (NIAAA, 2006).

Many of the aforementioned strategies can be used with young adults to reduce other substance use, especially cigarettes since they too are legal substances (NIAAA, 2006).

The NIAAA has sponsored several community trial prevention projects. Among the most well-known are The **Saving Lives** Project, the **Community Trials** Project, and the **Communities Mobilizing for Change** on Alcohol interventions. Each of these projects incorporates a comprehensive approach (NIAAA, 2006).

Six communities in Massachusetts were involved with the **Saving Lives** project. This project was designed to reduce alcohol-impaired driving and other related problems such as speeding. A task force developed specific community activities, including establishment of Students Against Drunk Driving (SADD) chapters, programs for college students, information about drinking and risks for retail alcohol outlets, telephone hotlines for reporting speeders, media campaigns, high-school peer-led education, drunk-driving and speeding awareness days, and police training. Over the five-year period of project, participating communities experienced more than a 40-percent reduction in alcohol-related fatal crashes and a 25-percent decrease in fatal car crashes relative to the rest of the state. The most pronounced effects were demonstrated for drivers between the ages of 15 and 25. Young adults in this age group experienced a 39-percent reduction in fatal crashes, compared to the rest of the state (Holder, 2004).

Designed to reduce alcohol-related harm, this experimental study was conducted over five years in California and South Carolina. The project incorporated five intervention components:

- Media and mobilization;
- Responsible beverage service;
- Sales to youth;
- Drinking/Driving; and
- Access.

Intervention communities experienced a 10-percent reduction in nighttime injury crashes and a six-percent reduction in crashes involving driver drinking. Assault injuries requiring hospitalization decreased by two percent (i.e., a significant drop) and similar injuries cared for in emergency

departments in the intervention communities declined 43 percent, compared to comparison communities (Holder, 2004).

The mobilization prevention project was aimed at reducing underage access to alcohol by changing local practices and policies. Fifteen communities in Wisconsin and Minnesota participated. Prevention interventions varied across communities. Results showed more awareness of the need to regulate alcohol sales to young people as well as an increase in checks of age identification during alcohol purchases. Drinking and drinking-related behaviors (i.e., attempting to purchase alcohol, providing alcohol to minors, and driving after drinking) declined, in particular, among 18-20 year olds. This finding further meant that seven percent fewer young adults reported drinking during a 30-day period and the number of drinking occasions declined (Holder, 2004).

Success of these three comprehensive interventions can be attributed, in part, to the fact that the interventions were adequately enforced. Moreover, the targets of the interventions were made aware of the policies and their enforcement (Holder, 2004).

The workplace has further become a target for substance use prevention in young adults. Existing workplace substance use prevention and early intervention programs primarily targeted older workers and thus did not address the new, younger, more diverse worker. As a result, SAMHSA began its Young Adults in the Workplace (YIW) initiative (Bray, Galvin, & Cluff, 2011).

Initially SAMHSA required YIW grantees to develop workplace programs using interventions shown to be effective either for adults in the workplace settings or for young adults in nonworkplace settings. Further the programs were to be modified for use with young adults in the workforce. Some of these grantees were then funded to implement the programs and participate in a cross-site evaluation. The program used in the YIW initiative drew from the Healthy WorkLife program, an interactive DVD-based health promotion and substance use prevention program and the Healthy Workplace programs, a series of workplace interventions recognized by NREPP as model workplace substance use prevention programs (Bray et al., 2011)

## Treatment

It is recommended that different addiction treatment approaches be used with different populations rather than following a “one size fits all” approach. Young adults have different psychology and habits from other populations so putting them in the same treatment with older adults in addiction recovery, e.g., often will not result in the best outcomes. Furthermore, the type of treatment of choice for the young adult will depend, in large part, upon his or her particular situation. Addiction treatment for the young adult will take place in one of the following settings: inpatient, outpatient, or combination (Addiction Blog, n.d.).

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- ***Inpatient*** – The young adult will reside in the treatment facility for treatment, which can last from 30 days to several months. Considered the most effective type of treatment, it is also

the most inconvenient and most expensive of addiction treatments. Inpatient treatment is also promoted as being more intensive.

- **Outpatient** – Rather than participating in a lengthy stay at a facility, outpatient treatment affords the young adult the opportunity to receive treatment in a more flexible way. Some treatment may require participation in treatment sessions several times a week, with each session lasting no more than a couple of hours. Some treatment, on the other hand, may only require participation in treatment sessions once each week. While less intensive than inpatient treatment, outpatient treatment is typically more affordable.
- **Combination** – This treatment combines inpatient and outpatient treatment. Typically the young adult will spend several hours at the treatment facility each day but will not reside at the facility. Such an arrangement allows the young adult to attend to other responsibilities like work or school while receiving moderately intense treatment (Addiction Blog, n.d.).

As for other populations, substance use treatment for young adults starts with screening and assessment, followed by a treatment program and aftercare. Treatment stages are delineated below.

- **Stage 1: Screening/assessment**

An addiction specialist evaluates the young adult and his or her substance use. If it is determined that the young adult has a substance use problem, a treatment plan will be developed. This plan commonly includes the type and duration of treatment, along with goals that can be worked on during treatment.

- **Stage 2: Detox and withdrawal**

During detoxification, an individual's body tries to rid itself of remaining substances and attempts to function in a normal manner without them. Withdrawal symptoms typically occur during detox and they can be very uncomfortable, sometimes even dangerous depending on the substance of use. In most instances, young adults are encouraged to undergo detoxification in a detox facility, for their safety and comfort.

- **Stage 3: Psychosocial and/or pharmacological treatment**

There are several facets to addiction treatment, with individual therapy being primary. For young adults, though, special emphasis is also placed on group therapy. This population is a very social group. Other treatment components might include medications, family counseling, and self-help groups such as AA or NA.

- **Stage 4: Aftercare**

Treatment involves a lengthy process and should not end with the completion of the initial treatment program. Most often, the key to effective substance use treatment for young adults is the aftercare. In aftercare, the individual continues outpatient therapy or counseling. Sometimes aftercare may include a stay in a transitional living facility (i.e.,



halfway house). This step helps promote abstinence and self-sufficiency in the young adult. A good aftercare plan will further include supportive services through which individuals are matched to support groups, job placement, and social services (Addiction Blog, n.d.).

There are a variety of treatment approaches for young adults with SUDs. One effective evidence-based program/practice is the Brief Strengths-Based Case Management (SBCM) for Substance Abuse. Brief SBCM is a one-on-one social service intervention that is designed to reduce barriers and time to treatment entry while improving the overall functioning of the individual. It is time limited, delivered in a maximum of five sessions unlike its full-version counterpart. (The full version is structured over many months, sometimes years.) Brief SBCM differs from case management because of its use of a strengths perspective. The perspective defines how to implement the five functions of the intervention's case management component: assessment, planning, linkage, monitoring, and advocacy. Each session is flexible and provides an opportunity for the clinician to develop and carry out a personal, client-driven plan that enhances the person's overall functioning and/or addresses specific barriers that link with treatment (SAMHSA/NREPP, n.d.).

Brief SBCM has been used with a wide range of adults, including young adults 18-25 years of age. A randomized control trial was used with clients seeking publicly subsidized substance use treatment. Clients were provided brief SBCM in five 90-minute session, one 60-minute motivational interviewing (MI) counseling session, or usual care which consisted of a recommendation of treatment level and referral to a specific program. More clients in the brief SBCM group (55.0 percent) entered treatment within 90 days of intake than in the MI (44.7 percent) or usual care (38.7 percent) group (SAMHSA/NREPP, n.d.).

There continues to be growing evidence of the efficacy of brief substance use treatments on college campuses and military bases. However, not all young adults are in college or the military and, as a result, may not be as aware of brief treatments. Moreover, not all college students or young adults in the military have substance use problems for which brief interventions are the appropriate treatment. Further, numbers of young adults continue to face the challenge of finding a provider after finally acknowledging they need help. The young adult age group does not advocate for themselves very well (IOM/NRC, 2015).

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Research has shown positive outcomes for young adults with COD when their specialty care has been integrated, residential SUD treatment (Bergman et al., 2014).

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As previously mentioned, young adults have the highest rates of co-occurring substance use/psychiatric disorders (CODs). Research has shown positive outcomes for young adults with COD when their specialty care has been

integrated, residential SUD treatment. Such treatment programs incorporate integrated evidence-based psychiatric services. Their symptoms reduced substantially, on average, from clinical to nonclinical ranges, despite more severe substance use profiles at treatment intake. It is believed that these programs will be especially effective for young adult persons with COD who have never participated in SUD-specific treatment or are not responding well to conventional outpatient SUD services (Bergman et al., 2014).

## Other Related Issues



Though the relationship between serious substance use and risk of unemployment is widely known, very few studies had prospectively examined this relationship among college students. Arria et al. (2013) conducted a longitudinal study to examine the association between substance use patterns during college and the likelihood of employment post college. Sociodemographic variables and personality characteristics were held constant. Participants entered college as traditional students and were assessed yearly for six years, regardless of whether they remained enrolled.

Results showed that persistent users of illicit substances (excluding marijuana) and/or nonmedical prescription medications were significantly more likely than nonusers to be unemployed rather than employed full-time post college.

Persistent users as well as infrequent users of marijuana were also more likely than nonusers to be unemployed rather than employed part-time. Hence, individuals with in-college substance use demonstrated poorer post-college employment outcomes, despite the fact they were college graduates (Arria et al., 2013).

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National Survey on Drug Use and Health (NSDUH) survey estimates further reflected past-month use of illicit substances for eight percent of full-time workers and criteria for heavy drinking met by eight and a half percent for persons employed full-time. Estimates were 19.5 percent and 15.5 percent, respectively, for full-time workers in the 18-25 year-old age group (Arria et al., 2013).

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8/15/2016

**Substance Use Best Practice Tool  
Guide**

**VETERANS**

Division of Clinical Leadership in Collaboration with the  
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## Veterans

Substance use has long been an issue of concern for the military, just as for the U.S. population. Veterans often encounter challenging experiences during their service and some of them turn to substance use as a way to cope with those experiences (Substance Abuse and Mental Health Services Administration [SAMHSA]/CBHSQ, 2015). There have been reports of detailed effects of alcohol on troops dating as far back as the Revolutionary War, and the Civil War saw the addiction of military personnel to opium prescribed for pain. In fact, addiction became known as the ‘soldier’s disease’. Substance issues for military personnel have shifted from decade to decade, but the problem still continues to be a major area of concern today. The all-volunteer military has endured long periods of deployment and re-deployment in highly demanding and taxing environments. Thus, it is not surprising that substance use, as well as posttraumatic stress, suicide, and traumatic brain injury are also at very high levels (IOM, 2013).

Many veterans diagnosed with mental illness also have a substance use disorder (SUD). There are reports that between 21-35% have this co-occurring problem. The highest rates of substance use co-occur among those with schizophrenia and bipolar disorder (Wiley-Blackwell, 2011). SUDs and mental disorders resulted in more hospitalizations among U.S. troops in 2009 than any other cause (SAMHSA, 2014b). Younger adult veterans, ages 18 to 25 years, were more likely to have substance use and other mental health problems than older veterans (NIDA, 2013). The Department of Defense (DoD) strongly discourages substance use by members of the military, largely because of the well-known detrimental effects and negative health consequences on military discipline, levels of performance, and readiness (IOM, 2013).

One of the most prevalent substance use problems for military personnel is alcohol use. Treatment Episode Data Set (TEDS) 2013 data showed alcohol (65 percent) as the most commonly reported primary substance of admissions by veterans, followed by 11 percent for heroin and six percent for cocaine. The 2013 substance use reports for veteran admissions differed from those of nonveterans, who had 37 percent reporting alcohol as the primary substance of use and 21 percent reporting heroin. Veterans were further less likely than nonveterans to report marijuana as the primary substance of use, six percent versus 13 percent (SAMHSA/CBHSQ, 2015).

A study involving Army soldiers screened within three to four months after their return from deployment to Iraq showed that 27 percent met criteria for alcohol use and were at increased risk for related harmful behaviors such as illicit drug use and drinking/driving (NIDA, 2011; Seal et al., 2011). Nearly one in eight veterans returning from Afghanistan and Iraq are referred to counseling for alcohol use. Gender statistics reported in the National Household Survey on Drug Abuse (NHSDA) showed that male veterans were more likely than their female counterparts to report alcohol use, binge drinking, and heavy use of alcohol.

<b>Alcohol Use:</b> Male Veterans 56% versus Female Veterans 41%
<b>Binge Drinking:</b> Male Veterans 23% versus Female Veterans 14%
<b>Heavy Drinking:</b> Male Veterans 7% versus Female Veterans 2% (NCADD, n.d.).

However, heavy drinking is an accepted custom, part of the military work culture. Alcohol is often used to reward hard work, ease interpersonal tensions, and promote camaraderie and cohesion within units. Alcohol is available to service persons at reduced prices at military installations and especially during ‘happy hours’. The easy access and availability of alcohol on military bases, due in part to cheaper costs, may also have played a role in its increased use (IOM, 2013).

Illicit drug use and nonmedical use of prescription drugs became popular in the military because they reduced pain, alleviated fatigue, and/or helped in coping with panic or boredom that accompanies battle. Heroin and opium were widely used by service members during the Vietnam War, as well as marijuana. It was estimated that nearly 43 percent of service members who served in Vietnam used these drugs at least once, and half of those who used were dependent on them at some time (IOM, 2013).

Substance use among active military personnel surfaced dramatically with operations in Afghanistan and Iraq, after approximately two decades of decline (Golub, Vazan, Bennett, & Liberty, 2013; ONDCP, 2010; Seal et al., 2011). Military personnel that had seen combat were at particular risk for substance use disorders (SUDs) (ONDCP, 2010). Research suggested that the unsettling surge in substance use by veterans was driven almost exclusively by the steep rise in the misuse of prescription drugs, especially pain relievers (ONDCP, 2010; VA, 2013). Prescription drug misuse in the military was associated with increases in the number of prescriptions for these medications written to alleviate chronic

pain among service members that had sustained injuries during the continuous events of war. The key driver of prescription drug misuse in the military was linked to having a prescription. Military personnel with prescriptions for pain medications were found to be almost three

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**The unsettling surge in substance use by veterans was driven almost exclusively by the steep rise in the misuse of prescription pain relievers (ONDCP, 2010; VA, 2013).**

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times more likely to misuse prescription pain relievers than those who did not have a prescription (Bray et al., 2009; Bray, Pemberton, Lane, Hourani, Mattiko, & Babeu, 2010); IOM, 2013).

According to a Journal of the American Medical Association Internal Medicine report, 15 percent of post-deployment U.S. military use opioids, compared to about four percent of the general population (NIH, 2014). Service members may experience extreme difficulty readjusting to civilian life and turn to substances to help them cope (VA, 2012). In the 18-64 age group, the percentage of women and men reporting prescription drug misuse in all military services combined was more than twice that for the civilian population, 11.5 percent compared to 4.4 percent (ONDCP, 2010).

Female veterans tended to use prescription drugs to a greater extent than alcohol (NCADD, n.d.).

In fact prescription drug use among women on active duty was more than four times that for civilian women (13.1 percent versus 3.2 percent). Moreover, service women, except those in the Marine Corps, were more likely than their male counterparts to use illicit drugs. Women in the Army were more than twice as likely as men in the Air Force, Navy, and Coast Guard to have used illicit drugs, including prescription drugs used nonmedically, in the past month (ONDCP, 2010).



## Screening

A Web site titled My HealthVet offers online screening tools amid other information for substance use as well as mental health conditions for veterans, military personnel, persons concerned about veterans/military personnel, and providers. This site has a plethora of resources, but the number of available resources makes access somewhat arduous to maneuver. The user needs to be patient and have sufficient time to actually navigate the site. For example, screening tools are not in plain sight. A person has to search and seek them out. The user should go to <https://www.myhealth.va.gov/index.html>, and then under Veteran's Services, Health & Well-Being, choose Mental Health. A new window will open and then go to the local navigation links on the left side of the page, select Conditions, then Substance Use. The last click should open the following page: <http://www.mentalhealth.va.gov/substanceabuse.asp>. Scroll down slightly to see the link to an "assessment". The screen asks about experiences using various substances including tobacco across the lifetime and in the past three months.

The My HealthVet Web site is an educational and informational site as well. Veterans/military personnel and/or those concerned about them or who work with them can also find out about the numerous services that are available through the United States Department of Veterans Affairs. Veterans can further manage their healthcare needs through the site.

There is a Self-Check Quiz that veterans/military personnel or those concerned about them can take online by accessing <https://www.vetsselfcheck.org/Welcome.cfm>. Scroll down to see the link to the quiz. It provides a safe and easy way to find out whether there might be issues related to depression and/or stress. This quiz was developed collaboratively by the Department of Veterans Affairs, National Suicide Prevention Lifeline, and American Foundation for Suicide Prevention.

## Recommended Treatments

Six manualized treatments have demonstrated efficacy in treating SUDs in veterans. These are (1) **motivation enhancement therapy (MET)**, (2) **cognitive-behavioral coping skills therapy**, (3) **community reinforcement approach**, (4) **behavioral couples therapy (BCT)**, (5) **contingency management (CM)**, and

**Six manualized treatments have demonstrated efficacy in treating SUDs in veterans (Borsari et al., 2011).**

(6) **twelve-step facilitation**. MET employs motivational interviewing along with assessment and personalized feedback. It is designed to help the veteran resolve ambivalence regarding

his or her use of substances. Identification and alteration of thoughts and behaviors that promote the substance use is the focus of cognitive-behavioral coping skills therapy. The veteran is educated about the model, collaborating with the therapist to identify and use different thoughts and behaviors and using role plays and behavioral rehearsals. Homework opportunities are typically provided through this model as well. The community reinforcement approach is a comprehensive cognitive-behavioral approach that focuses on aspects of the veteran's environment that either supports or hinders his or her substance use. Many techniques are incorporated including teaching new coping skills, involving significant others, and conducting a functional analysis of the substance

## Veterans

use. These techniques are designed to assist the veteran in creating a reinforcing sober lifestyle. BCT has a two-fold purpose—reducing the substance use while improving the marital relationship. The veteran's partner is involved to help reinforce abstinence, reduce the risk of relapse, and improve communication. Behavioral incentives are used in CM to help maintain sobriety. Incentives can consist of vouchers for goods and/or services or money. Sobriety is objectively measured via toxicology screens. Finally the twelve-step facilitation works to engage or increase engagement of the veteran in 12-step programs such as AA. These treatments have demonstrated efficacy across various substances. However, the veteran's motivation and current life situation, provider training/expertise, and the extent of available resources factor into delivery and potential for success (Borsari et al., 2011).

In addition, many veterans in the United States have a co-existing mental health disorder. Moreover, being young places a veteran at higher risk for serious psychological problems and/or co-occurring disorders. There is evidence that one third of veterans from the wars in Iraq and/or Afghanistan have psychiatric problems, with 20 to 40 percent in need of treatment. Post-traumatic stress disorder (PTSD) and SUD tend to co-occur very frequently in veterans. Research supports integrated versus sequential or parallel care approach to treating veterans. This approach has been shown to be more sensitive to the needs of the veteran service recipient, more cost effective, and to result in more successful outcomes. Further, the simultaneous treatment of co-occurring disorders through the integrated approach is preferred by service recipients and hence promotes better treatment adherence. *Seeking Safety* is an effective manualized program developed for use in the treatment of co-occurring PTSD and SUD and has been used with veterans. The intervention has demonstrated efficacy in reducing PTSD symptoms as well as substance use. *Seeking Safety's* success with the veteran population is emerging but recent pilot studies involving veterans of the Iraq and Afghanistan wars showed significant difficulty with treatment engagement and retention (Borsari et al., 2011).

Among the strategies for delivery of SUD treatments include stepped care, step-down treatment, and extended monitoring. Stepped care may be necessary for veterans who do poorly during or following the first step of treatment. They would then be introduced to a more intensive level of treatment, preferably in an individual setting with the same treatment provider each time. The goal of stepped care would be to increase treatment adherence and satisfaction while providing the right dosage of care. Step-down treatment might then be an effective way to discontinue treatment. It would allow for a gradual way to reduce the level of care intensity as opposed to abruptly ending with high-dosage treatment. Extended monitoring is then recommended to minimize the potential for relapse. The VA's telehealth technology system can serve as a valuable resource for extended monitoring services (Borsari et al., 2011).

A 2010 study utilizing these strategies with participants in intensive outpatient therapy for alcohol dependence found them to be an effective and efficient way to maintain gains made 18 months following treatment. As more veterans enter the system, a wealth of data will continue to be available for better understanding and improvement of the lifelong course of substance use and predictors of relapse for this population (Borsari et al., 2011).

## Other Treatment Issues

Irrespective of the approach or program, there are several issues that must be addressed when working with veterans.

1. Monitor the veteran's sobriety to the extent possible (Borsari et al., 2011).

Drug testing should be conducted throughout treatment to help encourage sobriety during sessions. Additionally, assist the veteran in creating a safety plan in the event sobriety is compromised.

2. Educate the veteran on his or her SUD (Borsari et al., 2011).

The veteran should be educated about his or her substance(s) of choice and how it affects the body. It may also be necessary to educate the veteran about the impact of his or her substance use on treatment and the ability to achieve treatment goals.

3. Address short-term distress associated with treatment (Borsari et al., 2011).

Sometimes treatment involving co-occurring substance use and mental health disorders in veterans lead to an increase in distress, thereby making substance use more appealing. Clearly explaining the possibility of short-term distress early during treatment will help prepare the veteran for the occurrence. In addition, alternate coping strategies should be discussed to offer options outside of substance use

4. Involve significant others in treatment to the extent possible (Borsari et al., 2011).

Research has shown inclusion of a concerned significant other in SUD treatment increases the probability that change will take place, especially if the veteran has a dependence on alcohol. Inclusion is encourage early in treatment, e.g., during the first or second session. This allows for delivery of psychoeducation to the veteran and his or her family member/partner as well as an opportunity to assess relationship functioning. These individuals can also be sources of valuable information about the veteran's substance use. Assessment of relationship functioning will be critical to identify which, if any, significant other(s) should be included into treatment.

## Treatment Facilities

A large number of veterans use the Veterans Health Administration (VHA), the healthcare system within the Department of Veterans Affairs (VA), when seeking treatment for substance use. Fortunately, the VHA has an extensive record-keeping system containing all data from lab work to session notes, so clinicians working with veterans should initially encourage the veteran to obtain these records. Of course, appropriate release of information forms must be completed so that coordinated care can be provided. It is further imperative that veterans be encouraged to report all medications they are currently taking. Any resistance to obtaining the data should be explored. The clinician and veteran should also address concerns that his or her involvement in treatment will be disclosed to officers to whom the veteran reports and/or fellow veterans early on, as well as over the course of treatment. Limits to confidentiality should further be clearly defined (Borsari, Capone, Mastroleo, & Monti, 2011).

## Veterans

Other veterans and military personnel may seek treatment from community based services. Many fear of discrimination or harm to their military career or that of their partner if treatment is received through Veterans Affairs (VA). Community-based care is typically the choice of National Guard and Reserve troops who have served in Iraq and Afghanistan, as well as their families, despite their eligibility for services through the VA (SAMHSA, 2014b). Of veterans in community-based treatment, slightly more than 20 percent were identified as homeless. However, homelessness was more prevalent among older than younger veterans in treatment (25 percent versus 14 percent)

Of veterans in community-based treatment, slightly more than 20 percent were identified as homeless (SAMHSA, 2014a).

(SAMHSA, 2014a).

Of course, there are veterans who are aware of their need for treatment but refuse to seek it. For some veterans/military personnel, admitting the need for help is inconsistent with the mental toughness prized in the military (Golub et al., 2013).

## Sample of Additional Resources for Veterans

- Veterans Crisis Line  
<http://www.veteranscrisisline.net/>  
800-273-8255  
Press 1, chat (<http://www.veteranscrisisline.net/ChatTermsOfService.aspx>) or text 838255
- American Red Cross and Armed Forces Emergency Services (AFES)  
<http://www.redcross.org/find-your-local-chapter>
- Military Support Groups and Centers  
<http://www.military.com/spouse/military-life/military-resources/military-support-groups-and-centers.html>
- Military OneSource  
<http://www.militaryonesource.mil>
- National Veterans Foundation  
<http://nvf.org/>
- Vet Centers  
<http://www.vetcenter.va.gov/>
- Warrior Care Blog  
<http://warriorcare.dodlive.mil/>

The Rural Health Information Hub (RHIIhub, n.d.) also provides information regarding access to health care for rural veterans since a disproportionate number, including veterans with service-related injuries, live in rural American.

## Conclusion

Research on substance abuse and associated problems among this country's military personnel, veterans, and their families is ongoing. NIDA, in collaboration with the U.S. Department of Veterans Affairs and other Institutes within the National Institutes of Health (NIH), continues to enhance and accelerate research on the epidemiology/etiology, identification, prevention, and treatment of tobacco, alcohol, and other drug use and abuse, including prescription and illicit drugs, as well as associated mental health problems among recently separated or active-duty military troops and their families. Much of the research is focused on veterans returning from wars in Iraq and Afghanistan (NIDA, 2011). A wealth of information and resources for service providers working with veterans and other military personnel can be found on the SAMHSA Web site (SAMHSA/CBHSQ, 2015).

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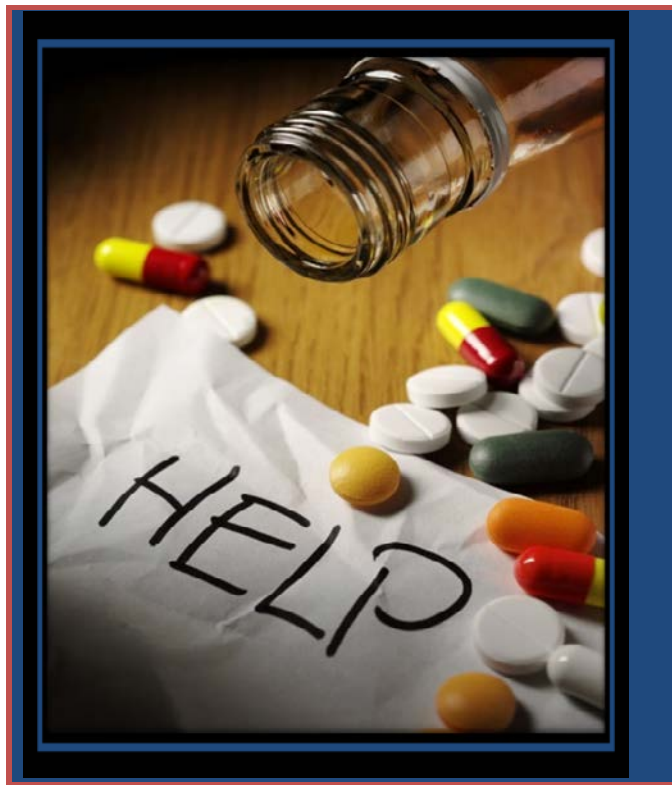
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**CRIMINAL JUSTICE**

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# Criminal Justice

Individuals whose struggle with substance use brings them into contact with the legal system typically experience enormous personal losses. Obviously they lose many freedoms, but family disintegration, deterioration of health, and loss of who they are as persons typically accompany criminal justice contact. The personal costs to the victims of their crimes are immeasurable. In fact, the effects reverberate throughout the entire community. Then there are the economic costs associated with arresting, processing, and incarcerating the offenders, along with the costs of police protection, property losses, and increased insurance rates (SAMHSA/CSAT, 2005).

There are at least five types of offenses related to substance use. They include offenses related to:

1. Substance possession or sales.
2. Directly obtaining drugs such as stealing to get money for drugs.
3. A lifestyle where the user of substances associates with other offenders or with illegal markets.
4. Abusive and violent behaviors, including sexual assault and domestic violence.
5. Driving while intoxicated or under the influence, which can be linked to property damage, accidents, injuries, and fatalities (NIDA, 2014a).

Substance use and intoxication can impair judgment and lead to poor anger management, violent behavior, and/or criminal behavior. Often users of substances commit crimes while “high”. A

A 2004 Department of Justice (DOJ) survey estimated that about 64 percent of Federal prisoners and 70 percent of State prisoners regularly used substances prior to incarceration (NIDA, 2014a).

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substances prior to incarceration. The study also indicated that 25 percent of the violent offenders in State prisons committed their offenses while under the influence of substances (NIDA, 2014a). More current data show that individuals in jails and prisons are four times more likely to have a substance use disorder than the general public (Vimont, 2013).

More current data show that individuals in jails and prisons are four times more likely to have a substance use disorder than the general public (Vimont, 2013).

Data from the Arrestee Drug Abuse Monitoring (ADAM) program and ADAM II program focus specifically on arrestees, a segment of the population at high risk for substance use and misuse. Findings of Lattimore et al. (2014) show that, in general, ADAM estimates of self-reported substance use are higher than estimates for arrestees in the National Survey on Drug Use and Health (NSDUH). For example, self-reported marijuana use during the past month among adult male arrestees was higher in ADAM than in NSDUH (42 percent versus 29 percent. ADAM estimates of powdered or rock cocaine use and crack use were also higher than NSDUH estimates: 20 percent and 13 percent compared to 12 percent and six percent. Similarly, ADAM estimates of past month methamphetamine use was higher than the NSDUH estimate, 12 percent versus three percent. However, the Lattimore et al. (2014) study suggests that the seeming undercoverage in NSDUH was not severe.

## Screening

Initially, the purpose of the screening should be identified. Since many infectious diseases are associated with the use of substances, it is highly likely that counselors will want to consider conducting a health screening, along with screening for other related problems. Identifying the special needs of offenders can improve the effectiveness of treatment. Screening can identify offenders who may pose threat to themselves or others, prevent crises, and promote immediate intervention. It should also be noted that screening guidelines will vary by setting. For instance, professional screening of a person newly arrested will incorporate different questions and required different information than screening of a long-term prisoner being considered for parole (SAMSHA/CSAT, 2005)

Experts at George Mason University, through the university's Center for Advancing Correctional Excellence! (ACE!), have developed several screening tools designed to improve substance use treatment in the criminal justice system. These tools, Risk-Needs-Responsivity Simulation Tools but typically referred to as RNR, focus on individuals as well as systems as a whole. RNR considers a wealth of information about the individual, including history of involvement in the criminal justice system. Individuals with moderate to high-risk scores tend to have more behavioral health patterns and problems: more risky behaviors, entrenched substance use, and mental health problems. The tool allows clinicians to recommend appropriate substance use treatment programs for individual prisoners, based on their specific needs (Vimont, 2013).

An online version of the RNR is available at <https://www.gmuace.org/tools/assess-individual> for clinicians that work with the offender population. This version helps with assessment of whether the treatment program is meeting the need of the offender. In addition, clinicians can evaluate their own programs, including how to strengthen them. There is a nominal fee for storing data in the RNR tool. Cost is dependent upon the size of the organization storing data in the tool. The tool further has a strategic planning capability that allows systems to identify gaps in services based on needs of the offenders. Entering offender characteristics will yield estimates of the number of offenders needing each level of treatment. Entry of program-characteristics would help with identification of the availability of adequate programming, as well as service gaps (Vimont, 2013).

## Treatment

The literature supports treatment as the best alternative for interrupting the substance use and criminal justice cycle for offenders with substance use problems. Offenders are encouraged to ask about the availability of treatment if not offered. Substance use that goes untreated places offenders at greater risk of relapse. It further jeopardizes public safety and health and taxes criminal justice system resources. Consistently treatment has been shown to reduce the costs associated with crime, lost productivity, and incarceration that result from substance use (NIDA, 2014a). Moreover,

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Offenders who enter treatment under legal pressure have outcomes as favorable as those who enter treatment voluntarily (NIDA, 2012).

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offenders who enter treatment under legal pressure have outcomes as favorable as those who enter treatment voluntarily (NIDA, 2012). For example, a 2009 study observed better outcomes for offenders addicted to opioids who began methadone treatment with counseling as prisoners

and then continued following release, compared to offenders who only received counseling while in prison or did not begin methadone treatment until after release (NIDA, 2012).

Research has demonstrated that treatment helps many offenders with substance issues change their attitudes, beliefs, and behaviors; avoid relapse; and successfully recover from a life of substance use and crime. Additionally, treatment can cut substance use in half, reduce criminal activity, and decrease arrests. It is acknowledged that legal pressure may be necessary to get individuals into treatment and to help them stay there. However, once in a treatment program, even the unmotivated tend to become engaged in the continuing treatment process. There is evidence that mandated treatment can be just as effective as voluntary admission to rehabilitation centers. Treatment in the criminal justice system can be incorporated in a variety of ways: a) as a condition of probation; b) through drug courts; c) in prison and followed with community-based treatment after discharge; and d) under probation or parole supervision (NIDA, 2014a).

Through NIDA-supported research, 13 principles of substance use treatment for criminal justice populations have been identified (NIDA, 2014b). The principles are presented below.

1. Addiction to substances is a brain disease that affects behavior.
  - ✓ In addition to the behavioral, cognitive, and physiological characteristics that contribute to continued substance use, researchers have observed alterations to the brain's anatomy and chemistry that result from substance use.
2. Recovery from substance use addiction requires effective treatment, followed by management of the problem over time.
  - ✓ Effective substance use treatment engages the participant in a therapeutic process, retains him or her in treatment for an appropriate length of time, and helps the individual learn to maintain abstinence. Sometimes multiple episodes of treatment may be required. Once offenders are in the community, monitoring of substance use and encouragement of continued participation in treatment can lead to improved outcomes.
3. Treatment must last long enough to result in stable behavioral changes.
  - ✓ Treatment lasting at least three months is necessary for persons with severe substance use problems and/or co-occurring disorders. In addition, more comprehensive

- treatment services should be provided for these individuals. Less time and intensity should result in successful outcomes for persons with less severe substance use issues.
4. The first step in treatment is assessment.
    - ✓ It is imperative that the nature and extent of a person's substance use problems be established. More comprehensive assessment may be necessary if personality disorders and/or other mental health conditions are present.
  5. Tailor services to fit the needs of the individual.
    - ✓ Individuals are different and may respond differently to treatment approaches and/or treatment providers. Tailored treatment facilitates development of healthy interpersonal relationships and improves the person's ability to interact with family, peers, and others in the community.
  6. Carefully monitor substance use during treatment.
    - ✓ Relapse is common in person's trying to recover from substance use. Triggers may vary but commonly include mental stress and/or associations with people and social situations linked to substance use. Monitoring substance use through urinalysis or other objective methods provides a basis for assessing and giving feedback on the individual's progress in treatment. It further provides an opportunity to intervene and change unconstructive behaviors.
  7. Treatment should target those signs and symptoms that are associated with criminal behavior.
    - ✓ Deal with the issues that tend to support criminal behavior and a criminal lifestyle such as feeling entitled to having things his or her way or failing to take responsibility for one's actions. Treatment that provides specific cognitive-skills training helps individuals recognize errors in judgment that may lead to substance use and associated criminal behavior.
  8. Criminal justice supervision should incorporate treatment planning for offenders that use substances and treatment providers should be aware of correctional supervision requirements.
    - ✓ Substance use treatment should be coordinated with correctional planning. Moreover, treatment providers should collaborate with criminal justice staff to evaluate each person's treatment plan and ensure that it meets correctional supervision requirements while meeting that person's changing needs. Treatment plans for offenders with substance use issues should incorporate transition to community-based treatment and links to appropriate post-release services.
  9. Continuity of care is critical for offenders with substance use issues that are re-entering the community.
    - ✓ The best outcomes have been found for offenders who complete prison-based treatment and continue with treatment in the community. Treatment during incarceration often begins the process of therapeutic change that results in diminished substance use and criminal behavior post incarceration. Continuing treatment in the community serves to help sustain those gains.



10. A balance of rewards and sanctions encourages pro-social behavior and participation in treatment.
  - ✓ Correctional supervision of persons participating in substance use treatment should reinforce positive behavior using nonmonetary social reinforcers such as recognition for sincere effort or progress. Graduated sanctions that are consistent, predictable, and clear have also been found to be effective. Rewards and sanctions tend to have the desired effect when they are perceived as fair and when they quickly follow the targeted behavior.
11. Offenders with co-occurring substance use and mental health problems often require an integrated treatment approach.
  - ✓ Offender populations and persons with substance use problems tend to have high rates of mental health problems. The presence of co-occurring disorders typically requires an integrated approach that combines substance use treatment with psychiatric treatment, including the use of medication.
12. Medications are an integral part of treatment for many offenders that use substances.
  - ✓ Evidence-based medication-assisted treatments such as buprenorphine, methadone, and extended-release naltrexone have been shown to reduce use of heroin and should be made available to persons who could benefit from them. These treatments can also be instrumental in enabling individuals with co-occurring mental health conditions to function successfully in society. Behavioral approaches have been shown to enhance adherence to medication regimens.
13. Treatment planning for offenders with substance use issues who are living in or re-entering the community should include strategies to prevent and treat chronic, serious medical conditions such as HIV/AIDS, hepatitis B and C, and tuberculosis.
  - ✓ Rates of infectious disease such as HIV/AIDS, hepatitis, and tuberculosis are higher in incarcerated offenders, substance users, and offenders under community supervision than in the general population. Offenders who use substances should be offered testing for infectious diseases and receive counseling on their health status, as well as on ways to modify risk behaviors. Parole and probation officers who monitor these individuals should link them with appropriate health care services, encourage adherence with medical treatment, and re-establish their eligibility for public health services prior to their release from the incarcerated setting (NIDA, 2014b).

For many individuals with substance use problems, contact with the criminal justice system is their first opportunity for treatment. For other offenders, arrest and incarceration are part of a repeated cycle of substance use and crime. Thus, offenders with a prolonged history of substance use and crime may require a more intensive treatment approach. Patterns of maladaptive coping skills and criminal beliefs and values may be ingrained for offenders in the latter category (NIDA, 2014a).

Despite clear benefits to offenders, their families, and communities, treatment is not a priority in many prisons (NIDA, 2014a). In fact, it has been said that less than 10 percent of adults and around 20 percent of adolescents with substance use issues and connected to the criminal justice system receive treatment on a given day. For adults, nearly seven in 10 report being offered substance use treatment but criminal justice facilities are unable to accommodate the number of participants who need this service. Furthermore, the most frequently provided substance use



services in the criminal justice system, substance use education and low-intensity group therapy (i.e., less than four hours per week), are ineffective for offenders (NIDA, 2009).

## **Tennessee Department of Mental Health and Substance Abuse Services (TDMHSAS) Programs Aimed at Criminal Justice and Accompanying Research**

The Tennessee Department of Mental Health and Substance Abuse Services (TDMHSAS) has an array of programs aimed at criminal justice populations. These programs, along with accompanying research, are described below.

### **Criminal Justice/Behavioral Health Liaison Program (CJ/BH/LP).**

This program is a community project designed to facilitate communication and coordination among the community, criminal justice, and behavioral health systems. The effort is focused on achievement of common goals of decriminalizing mental illnesses, co-occurring disorders (COD) and substance abuse disorders; supporting the establishment of services that would promote diversionary activities for people with serious mental illness (SMI), mental illness (MI), COD or substance abuse disorders who come in contact with the criminal justice system due to an arrest; and providing case management and liaison services to adults with SMI, MI, COD or substance abuse disorders who are incarcerated or at risk of incarceration and who would benefit from referral and linkage to behavioral health and other recovery/supportive services (TDMHSAS, n.d.a). A list of Criminal Justice Liaisons can be found at [http://tn.gov/assets/entities/behavioral-health/mh/attachments/Criminal\\_Justice\\_Liaisons.pdf](http://tn.gov/assets/entities/behavioral-health/mh/attachments/Criminal_Justice_Liaisons.pdf).

### **Recovery (Drug) Courts.**

Formerly known as drug courts, these specialized courts or court calendars incorporate intensive judicial supervision, treatment services, incentives, and sanctions to address the needs of offenders who are nonviolent, addicted, may have co-occurring disorders, and may be a veteran. (Mental Health and Veteran Courts have also been combined with these courts.) The term “recovery court” is preferred in Tennessee to symbolize the all-encompassing aspect of the court program and the emphasis on recovery (TDMHSAS, 2013). These courts operate on a “no wrong door” philosophy, which is standard practice for recovery-oriented systems-of-care models (Gaumond & Whittier, 2009). The target population is comprised of juvenile and adult offenders, male or female, who meet criteria for and want to participate in the Recovery Court Program. Recovery court teams are comprised of a judge, prosecutor, defense attorney, drug court coordinator, probation officer, treatment providers, and other program staff. In Tennessee, enrollment in a recovery court by an offender may allow him or her to avoid jail time. The expectations of those willing to participate, however, are intensive. Recovery court programs are very demanding and highly structured. The journey is long and hard as the road to recovery is not easy. If participating offenders take ownership of their lives and the choices that they make, they can succeed at breaking the cycle of addiction and living a substance-free life (TDMHSAS, 2013; TDMHSAS, n.d.b).

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The Drug Treatment Act of 2003 established the legitimacy of recovery courts statewide. Our state has a Recovery Court Certification process and is one of few states to have such a process in place. Like drug courts, recovery courts must adhere to the Ten Key Components for defining drug courts, as adopted by the Bureau of Justice, Justice Assistance Programs. Those components are:

- **Key Component #1** - Drug courts integrate justice system case processing with alcohol and other drug treatment services.
- **Key Component #2** - Employing a non-adversarial approach, prosecutors and defense attorneys promote public safety while protecting participants' due process rights.
- **Key Component #3** – Identify people eligible for drug court participation early and early and promptly place them in the program.
- **Key Component #4** - Drug courts provide access to a continuum of drug, alcohol, and other related treatment and/or rehabilitation services.
- **Key Component #5** - Abstinence is monitored by frequent drug and alcohol testing.
- **Key Component #6** - A coordinated strategy is utilized to determine drug court responses to compliance of the participants.
- **Key Component #7** – Interaction of the drug court judge with each participant on an ongoing basis is essential.
- **Key Component #8** – Coordinated management, monitoring, and evaluation systems measure achievement of program goals and gauge effectiveness.
- **Key Component #9** – Periodic education and training across drug court and education staff enhance effective drug court planning, implementation, and operations.
- **Key Component #10** - Building partnerships among drug courts, public agencies, and community-based organizations generate local support and enhance effectiveness of the drug court program (NADCP Web site, n.d.; NADCP, 1997).

Establishing recovery courts was part of the Governor's Public Safety Plan 2014. Among the action items in the plan were: 1) Expansion of access to recovery courts

Establishing recovery courts was part of the Governor's Public Safety Plan 2014 (Abbott, 2014).

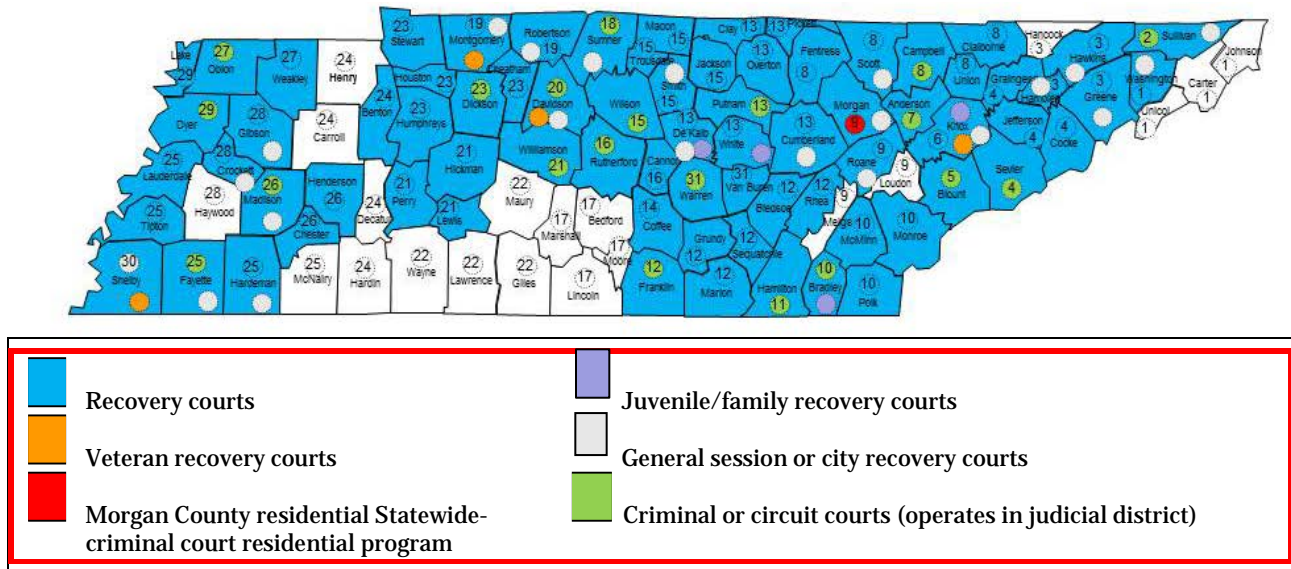
across the state, with emphasis on treating serious prescription drug and meth addictions; and 2) More focus of state recovery dollars on courts serving defendants who would otherwise be incarcerated at the state's expense. Participants in recovery court need access to community AA/NA and other self-help meetings, as well as people with lived experiences and are required to attend community meetings as part of their court programming (Abbott, 2014).

A specialized statewide Recovery Court has been established in collaboration with the TDMHSAS and the Tennessee Department of Corrections (TDOC). Known as the Morgan County Residential Recovery Court (MCRRC), this recovery court opened July 1, 2013, and had 30 participants as of October 15, 2013 (Abbott, 2014). Participants have come from 22 counties and 14 judicial districts across the State. They are representative of all walks of life and backgrounds, and include young men, older men, professionals, veterans, husbands, fathers, and grandfathers. As of the TDMHSAS Winter 2014 newsletter, 27 participants had successfully completed the long-term program and many others were in various stages of the program. This specialized Recovery Court is the only program of its kind in the state and now has 14 other recovery courts in the State from which it receives referrals (Judson, 2015).

Preliminary results showed the recidivism rate for participants in MCRRC was less than 20 percent. These early results were promising, especially since research indicated 50 percent of untreated addicts who had been convicted of a crime return to the criminal justice system within three years of release. Cost of housing and treatment, on average, at MCRRC is around \$50 per day, compared to \$75 per day per individual in jail. The residential portion of treatment for MCRRC participants is about 18 months (Judson, 2015).

The map below shows recovery courts funded in FY 16. Court programs are located in 75 counties and 28 judicial districts (Ledbetter, June 2015, personal communication; TDMHSAS, 2016).

Figure 1. Map of FY 16-Funded Recovery Courts



Source: Ledbetter, June 22, 2015, personal communication.

TDMHSAS Commissioner E. Douglas Varney continues to acknowledge the benefits of recovery courts in giving people a second chance to be productive citizens. Evaluation results for recovery court participants from 2013-2015 indicate that:

- **81** percent saw improvement in their job status or became employed.
- **63** percent maintained an independent living situation upon program completion.

- **28** percent who were either homeless or living in a group home had secured their own place
- **14** percent improved their educational status by obtaining a general education development (GED) diploma or attaining an advanced degree (TDMHSAS News, 2015; TDMHSAS, 2016).

### ***Research on Adult Drug Courts.***

Drug courts continue to proliferate because many people believe that uniting judicial supervision with treatment is a more effective way to reduce future drug use and crime than either strategy employed in isolation. Moreover, drug courts have the potential to relieve the overburdened correctional facilities and justice systems (Fluellen & Trone, 2000).

Eligible persons with drug addictions may be sent to Drug Court rather than through traditional justice system case processing. Participants are remanded to treatment under supervision long enough for it to work. Eligible individuals participate in Drug Court for a minimum of one year. During that time, they:

- Undergo intensive treatment and other services necessary for them to get and stay clean and sober.
- Are accountable to the Drug Court judge for meeting their obligations to the court, themselves, their families, and society.
- Undergo random and regular drug testing.
- Are recognized for meeting their obligations and sanctioned when they fail to live up to their obligations (NADCP Web site, n.d.).

Research on drug courts is very positive. For example, findings for drug court participants followed six and twelve months from discharge were reported at the 2009 Annual Conference of the American Society of Criminology. Drug Court participants reported significantly less heavy use of alcohol and use of illicit drugs. While these data involved self reports, the findings were validated by saliva drug tests, which revealed significantly fewer positive drug tests by participants. Also reported were significantly less criminal activity and improved family relationships. Drug Court participants also tended to demonstrate higher annual incomes and employment rates (Marlowe, 2010a).

Research further showed that fidelity to the full Drug Court model is necessary for optimum outcomes when programs treat their correct target population: high-risk, addicted drug offenders. Thus, the following components are required:

- ***Regular attendance by the judge, defense attorney, prosecutor, law enforcement officers, and treatment providers at status hearings or staff meetings is a requirement***

**of effective Drug Courts.** Research indicated about half less favorable outcomes if any of the aforementioned professional disciplines is absent from team discussions on a regular basis (Marlowe, 2010a).

- **Judicial status hearings are an indispensable element of Drug Courts.** During the first phase (i.e., the first few months), the optimal schedule requires bi-weekly hearings at the very least. Later the hearing schedule can be reduced, but not less than monthly until participants have achieved a stable period of sobriety and completed the intensive phases of their treatment regimen (Marlowe, 2010a).
- **Urine drug testing is conducted at least twice a week during the first several months of the program in effective Drug Courts.** Anything less leaves an unacceptable time gap during which participants can use drugs and evade detection. Moreover, the drug testing should be conducted on a random basis for effectiveness (Marlowe, 2010a).
- **Gradually escalating sanctions for infractions significantly improves outcomes for Drug Court participants?** Such sanctions might involve brief periods of jail detention. Preliminary evidence suggests that higher-risk, incorrigible participants might demonstrate more improved outcomes if provided tangible incentives such as certificates of accomplishment (Marlowe, 2010a).
- **Longer tenure in substance abuse treatment leads to better outcomes for Drug Court participants.** The quality of treatment also plays a critically important role, and the most effective Drug Courts have adopted standardized, evidence-based treatments, such as the Matrix Model, Moral Reconciliation Therapy (MRT), and Multisystemic Therapy (MST). The most effective treatments are highly structured, apply behavioral or cognitive-behavioral interventions, are clearly specified in a workbook or manual, and take the participants' communities of origin into account (Marlowe, 2010a).

### ***Research on Juvenile Drug Treatment Courts.***

On the whole, research on juvenile drug treatment courts has lagged behind its adult counterpart. More research is being conducted and results are showing promise. For example, compared to matched juvenile probationers, participants in the juvenile treatment drug courts were significantly less likely to be arrested for a new offense at 28 months post-entry. Moreover, an experimental study reflected significantly lower rates of substance use and delinquency for juvenile drug treatment court participants (Marlowe, 2010b).

Negative or inconsequential results have been associated with the following problems in juvenile drug court treatment programs:

- Failure to offer evidence-based treatments
- Failure to include family member or other caregivers in the interventions

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- Failure to tailor the interventions to the maturational and cognitive levels of the young person (Marlowe, 2010b).

Recent results support the benefits of having parents/caregivers regularly attend status hearings. With more regular attendance by parents/caregivers, juveniles are less likely to:

- Receive sanctions for behavioral infractions in the program.
- Provide positive drug tests.
- Be tardy or absent from treatment
- Be late or absent from school (Marlowe, 2010b).

## **Driving Under the Influence (DUI) School Program.**

This intervention program, licensed through the State of Tennessee, provides assessment, education and, if indicated, appropriate treatment referral, for offenders of driving under the influence of alcohol and/or other drugs. The DUI Schools use the *Prime for Life* curriculum, the state's mandated DUI education program approved by TDMHSAS (TDMHSAS, n.d.c). The curriculum has been recognized by SAMHSA's National Registry of Evidence-Based Programs and Practices (NREPP). Established by the Prevention Research Institute, a non-profit organization, *Prime for Life* was designed to minimize the occurrences of drug and alcohol related incidents. The core focus is on improving attitudes of the student and creating a positive outlook to decrease dependency by using the latest research on brain chemistry and addiction. The curriculum provides a minimum of 12 hours of education using a user-friendly instruction manual to classes of no more than 25 students. There are 87 DUI Schools across the state (TDMHSAS, 2014a). A list of DUI Schools can be found at [http://tn.gov/assets/entities/behavioral-health/sa/attachments/DUI\\_Schools.pdf](http://tn.gov/assets/entities/behavioral-health/sa/attachments/DUI_Schools.pdf).

## **Community Treatment Collaborative (CTC) Program.**

The Community Treatment Collaborative (CTC) Program is funded through an interagency agreement between the Tennessee Department of Correction (TDOC) and TDMHSAS. It is a collaborative effort to divert at-risk probation and parole technical violators with substance abuse and co-occurring disorders from returning to state prison (TDMHSAS, n.d.d). These violators might break rules set for their probation by the court, such as skipping a meeting with the probation officer or failing a drug urine test (attorneys.com, 2014). Violations include things the parolee or probationer has done wrong as well as things he or she may have failed to carry out. CTC requires a collaborative treatment approach which engages the service recipient, provider, TDOC staff and other supports. The CTC program provides a full continuum of care, including Outpatient, Detox, Residential Rehabilitation, and Halfway House services (TDMHSAS, n.d.d).



## **Alcohol and Drug Addiction Treatment (ADAT) Program.**

ADAT is a state-funded program that is designed to pay for court-ordered alcohol and substance abuse treatment services for Driving Under the Influence (DUI) offenders who, based on a current conviction, are ordered to treatment and deemed indigent by the court (TDMHSAS, 2015). The program will pay for approved individuals to receive an alcohol and drug assessment, as well as appropriate treatment. Hence, ADAT will cover treatment services throughout the service recipient's treatment episode once he or she has been approved (TDMHSAS Web site, n.d.e).

A judge will, upon conviction, determine if a defendant meets the state established criterion and can benefit from up to 20 days of inpatient treatment. Treatment providers determine the duration of treatment for all except inpatient care (Knox County General Sessions Judges, n.d.). Funded treatment providers are required to use an evidence-based program geared to the targeted population (TDMHSAS, 2015). If the court determines that the treatment is appropriate, the judge will enter an order that directs the defendant to undergo an assessment and receive inpatient treatment as appropriate. A copy of the warrant along with the Assessment Order and Court Order is faxed to TDMHSAS for approval (Knox County General Sessions Judges, n.d.).

The Court authorizes ADAT as a condition of probation (Knox County General Sessions Judges, n.d.). The program provides a full continuum of care including Residential Rehabilitation, Halfway House and Outpatient services (TDMHSAS Web site, n.d.e).

## **Supervised Probation Offender Treatment (SPOT) Program.**

The SPOT program is designed to pay for court-ordered alcohol and drug treatment services for an individual with a current nonviolent misdemeanor conviction or a nonviolent felony conviction where the offender is sentenced to supervised probation and has past criminal history that is a function of substance use and/or addiction or a violation of the Tennessee Drug Control Act and a current nonviolent criminal conviction where the offender is sentenced to supervised probation. If the sentenced individual, whether sentencing involves supervised probation and/or court-ordered alcohol and drug assessment and treatment, or both, is determined to be indigent, at least some portion of the expense, sometimes all, may be paid with SPOT funds. SPOT provides a full continuum of care including Outpatient, Residential Rehabilitation, and Halfway House services. Some recovery services are also covered by the SPOT program (TDMHSAS, n.d.e).

## **Criminal Justice Treatment Provider Application Process.**

Any entity interested in becoming a criminal justice treatment provider must first have a valid State of Tennessee treatment facility license from the TDMHSAS Office of Licensure to provide the level of care being applied for. Submit proof of the license along with the application. The facility must be operational and have provided treatment services for a period not less than one year. Moreover, the facility must have a registered Edison number with the state's Department of Finance and Administration. If a 501(c)3 agency, proof of such status must be submitted with the application. It is required that the applying agency utilize evidence-based treatments such as Cognitive Behavioral Treatment, Motivational Interviewing, or Hazelden's Co-Occurring Disorders Program Curriculum (TDMHSAS, n.d.f). A list of evidence-based treatment modules can be found at SAMHSA's NREPP Web site, <http://www.samhsa.gov/nrepp>.



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After meeting the aforementioned requirements, complete and return the application along with all requested information. *However, application submission does not guarantee acceptance into the provider network.* Provider selection is based on numerous factors, including geographic location, available funding, and need for specific levels of care (TDMHSAS, n.d.f). The application packet can be found at [http://tn.gov/assets/entities/behavioral-health/sa/attachments/Criminal Justice Treatment Provider Application.pdf](http://tn.gov/assets/entities/behavioral-health/sa/attachments/Criminal_Justice_Treatment_Provider_Application.pdf).

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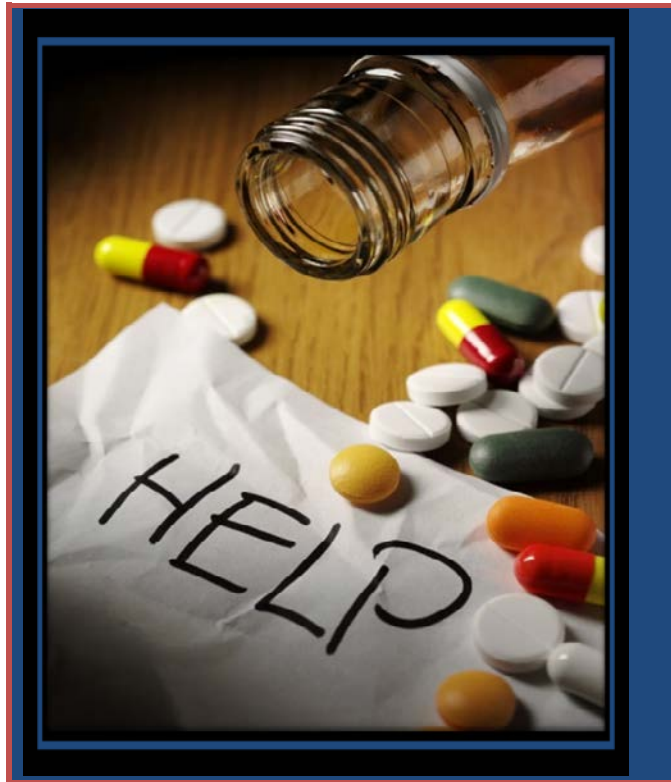
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Department of  
**Mental Health &  
Substance Abuse Services**



8/15/2016

**Substance Use Best Practice Tool  
Guide**

**DRUG POISONING  
DEATHS**

Division of Clinical Leadership in Collaboration with the  
Division of Substance Abuse Services

## Drug Poisoning Deaths

Poisoning, due to drugs, is the leading cause of death in the United States (Chen, Hedegaard, & Warner, 2014; Hedegaard, Chen, & Warner, 2015). Prescription and illicit drugs accounted for 90 percent of the poisoning deaths in 2011 (Chen et al., 2014).

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According to the National Safety Council (2016), 52 people die every day from an overdose of prescription painkillers.

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According to the National Safety Council (NSC), 52 people die every day from an overdose of prescription painkillers (NSC, 2016). In 2011, there were 41,340

drug-poisoning deaths in the United States in 2011, 41 percent of which involved opioid analgesics (Chen et al., 2014).

The age-adjusted, drug-poisoning death rate from 1999 to 2011 more than doubled (6.1 per 100,000 to 13.2 per 100,000, respectively); however, the pace was slower from 2006 to 2011 than from 1999 to 2006. Between 1999 and 2006, the death rate increased 18 percent yearly, but increased by only three percent each year between 2006 and 2011 (Chen et al., 2014).

- Drug-poisoning deaths from methadone increased from 1999 to 2007, only to decline by 2011.
- Poisoning deaths from benzodiazepines consistently increased, on average, 14 percent each year from 1999 to 2011.
- The largest increase in poisoning deaths by opioid analgesics was demonstrated for individuals aged 55-64 years of age.
- Disparity in rates between non-Hispanic Whites and non-Hispanic Blacks or Hispanics has widened (Chen et al., 2014).

Much of the increase in drug overdose deaths has been attributed to prescription painkillers, i.e., opioid pain relievers. Research shows a substantial rise in the sale of these strong painkillers since 1999 (Baumblatt et al., 2014; CDC, 2011; Sauber-Schatz, 2013; TFAH, 2013). The number of overdose deaths from these prescription drugs was greater than the combined number of overdose deaths for heroin and cocaine (Baumblatt et al., 2014; CDC, 2011; NCSL, 2015). That trend continued into 2013 (Hedegaard et al., 2015). Countless emergency department visits are the result of abuse and misuse of prescription painkillers as well. It is reported that greater than 12 million people used these substances nonmedically, i.e., for the feeling elicited by the drugs or without benefit of a prescription (CDC, 2011). Data for 2014 implicates the synthetic opioids fentanyl and tramadol in the increase in prescription opioid-related deaths (Frank, 2015).

Nearly half of overdose deaths linked to prescription opioid pain relievers involve at least one other drug. Typically the other drug includes one or more of the following: alcohol, benzodiazepines, cocaine, and/or heroin (CDC, 2011).

*In 2012, health care providers in the United States wrote enough opioid prescriptions for every adult to have a bottle of pills.* All total, 259 million

prescriptions for opioids were written

(CDC, 2014a; NSC, 2016). There also exists substantial variation in painkiller prescribing by state and/or region of the country. Southern states topped the list showing the most prescriptions per person in 2012. Alabama and **Tennessee** tied for first (143 per 100 persons), followed by West Virginia in third place (138 per 100 persons). It was further noted that more than 20 times the prescriptions were written for the opioid oxycodone, a medication used to relieve moderate to severe pain in individuals requiring continuous, around-the-clock treatment over a long period of time, in **Tennessee** as in Minnesota (CDC, 2014a).

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259 million prescriptions for painkillers were written (in 2012 in the U.S.) (CDC, 2014a; NSC, 2016).

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*According to the controlled substance database (CSD) report presented to the Tennessee General Assembly in 2011, 275 million hydrocodone pills, 117 million alprazolam (Xanax) pills, and 113 million oxycodone pills were dispensed statewide.* Those amounts equate to 51 hydrocodone pills, 22 Xanax pills, and 21 pills of

oxycodone for every Tennessean above the age of 12 (CSD Advisory Committee, 2011; Shepherd, 2013).

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In 2013, the number of prescriptions written in the U.S. declined to about 207 million. Nevertheless, use and misuse remained a major issue. As a country, we accounted for almost 100 percent of the world's total hydrocodone and slightly better than

80 percent of oxycodone (Volkow, 2014). Moreover, drug-poisoning deaths have surpassed traffic-related crashes as the leading cause of injury death since 2009. Emergency department visits for children, in many cases, are the result of the child taking prescription medications that belonged to an adult (TFAH, 2013).

The majority of cases involving prescription drug overdoses have not stemmed from criminal activity such as pharmacy theft. Instead, the drugs involved more commonly came from original prescriptions. Either the drugs were diverted to people for whom the prescription was not written or the individual to whom the drugs were prescribed decided to take dosages higher than recommended. Seventy-five percent of people who misuse prescription pain relievers use substances that have been prescribed to someone else. Many prescriptions for opioid painkillers are written by primary care physicians and dentists. Further, the bulk of prescribing is done by one fifth of the prescribers (CDC, 2011).

Based on existing evidence, individuals at greatest risk for prescription opioid overdose include:

- Adults aged 45-54 years.
- Men (however, overdose among women is on the rise).
- People living in rural areas (clusters in the Southeast, particularly in the Appalachian region).



- People who obtain multiple controlled substance prescriptions (such as the combination of opioid analgesics and benzodiazepines) from multiple providers.
- People who take high daily dosages of opioid pain relievers.
- White and American Indian/Alaska Native people (ASPE, 2015).

From 1999 to 2010, death rates from prescription opioid pain reliever overdoses quadrupled nationally while rates from heroin overdoses increased by less than 50 percent. Since 2010, there has been a steady increase in the number of drug-poisoning deaths involving heroin. A study of data from 28 states reported that the death rate for heroin overdose doubled from 2010 through 2012 (Hedegaard et al., 2015).

The total number of drug-poisoning deaths in the U.S. in 2013 rose to 43,982. Of those deaths, 16,235 (37%) involved opioid analgesics and 8,257 (19%) involved heroin. A very small subset of deaths (1,342 or 3%) involved both opioid analgesics and heroin. Hence, the rate for heroin-related deaths has almost tripled since 2010. In 2013, heroin-related deaths for men were nearly four times higher (6,525 deaths) than for women (1,732 deaths) age groups, census regions, and

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**The rate for heroin-related deaths has almost tripled since 2010 (ASPE, 2015; Hedegaard et al., 2015).**

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ethnic/racial groups except American Indians/Alaska Natives (CDC, 2014c). From 2000-2013, the 25-44 year-old age group has reflected the highest heroin overdose death rates (Hedegaard, 2015). Statistics from 2013 to 2014 show a 28 percent increase in heroin-related death rates. Heroin is commonly cut with fentanyl, with or without knowledge of the user, in order to enhance its effect (Frank, 2015).

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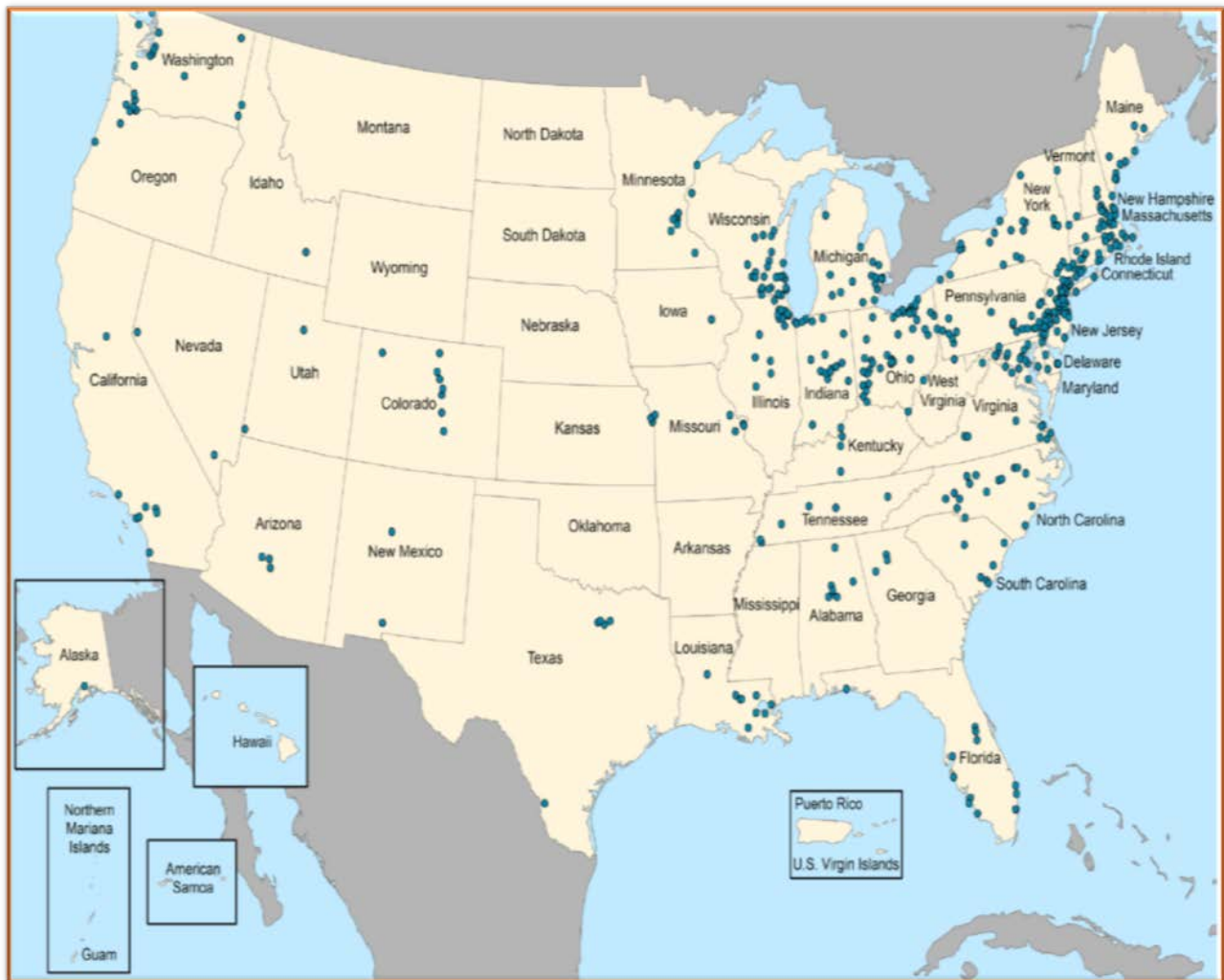
**The literature indicates there is no longer a typical heroin user (DEA, 2015).**

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A retrospective study of heroin use in the U.S. over the past 50 years demonstrated that among individuals who initiated abuse of opioids in the 1960s, eight in 10 reported they initiated with heroin. Among those

persons who began abusing opioid in the 2000s, in contrast, three fourths reported they initiated with prescription opioids (ASPE, 2015; NSC, 2016). Persons using opioid pain relievers nonmedically were 19 times more likely to report heroin use than people who did not report misuse of prescription opioids (NSC, 2016). Results from the study also indicated that today's heroin is more accessible, significantly cheaper, easier to inhale/inject, and much more potent than prescription opioids (ASPE, 2015). Recent reports are indicating that, in the U.S., heroin is available in larger quantities, used by a larger number of people, and causing an increasing number of overdose deaths. From 2010 to 2014, heroin seizures increased 81 percent, from 2,763 kilograms (kg) to 5,014 kg. The average size of these seizures doubled for this time period, from 0.86 kg in 2010 to 1.74 kg in 2014. The drug has increased in purity so it can be snorted or smoked, which has broadened its appeal. There are reports that many individuals who would never have considered injecting a drug were introduced to heroin by inhalation. In fact, inhalation is still reported as the most common method of administration by new heroin initiates. The drug has further spread to users in rural and suburban areas, younger users, more affluent users, and users of a wider range of races and ethnicities. The literature indicates there is no longer a typical heroin user (DEA, 2015).

Figure 1. Places Where Respondents Reported Heroin as Greatest Drug Threat



Source: 2015 National Drug Threat Survey (DEA, 2015).

Nonmedical use of opioids, including heroin and prescription pain relievers, has contributed to the upward trend in poisoning overdose deaths over the last couple of decades. However, there are other contributing factors (Volkow, 2014).

For example, tolerance, a property of opioid drugs when used repeatedly over time, places users of opioid painkillers at high risk of overdose as well. It occurs when an individual no longer responds to the substance as strongly as he or she did initially, and now requires a higher dose to achieve the same effect. Tolerance plays out in overdosing particularly during relapse after a period in recovery. The users fail to realize they likely lost their tolerance during abstinence and start using again at the high dosage established prior to quitting. Such a dosage will result in overdose for individuals who no longer have tolerance (Volkow, 2014). This may be a particular problem for the person addicted to heroin who has stopped using for a period of time due to rehabilitation programs, incarceration, etc., and then returns to using heroin (DEA, 2015).

Another group of individuals at high risk of overdose are those with chronic pain who use opioid analgesics along with benzodiazepines and/or alcohol. Any combination of CNS depressants and opioid analgesics should occur only if there is a documented medical reason for such combinations. Such cases would require tremendous scrutiny and monitoring (Volkow, 2014).

## Drug Overdose Statistics in Tennessee

In 2010, the prescription drug overdose death rate for the nation was 12.4. Our state's rate for the same time frame was 16.9. The literature reflects a positive correlation between the rise in opioid overdose deaths and the increase in prescribing of these drugs (CDC, 2014b). Recent statistics have shown that rural counties, especially in the south, have been hit hardest. From 1999-2014, death rates from prescription drugs climbed three times faster in rural areas than it did in urban cores of large cities. Opioids such as hydrocodone and oxycodone contributed most to the increase. Moreover, two rural Tennessee counties cracked the top 30 in higher death rates from prescription drugs for the 15-year time period (Marema, 2016).

**Table 1. Tennessee Resident Deaths from Drug Overdoses**

Year	Overdose Deaths	Percent Increase
2001	422	
2002	484	14.7%
2003	660	36.4%
2004	753	14.1%
2005	868	15.3%
2006	963	10.9%
2007	972	0.9%
2008	924	-4.9%
2009	929	0.5%
2010	1,059	14.0%
2011	1,062	0.3%
2012	1,094	3.0%
2013	1,166	6.6%
2014	1,263	8.3%

Source: TDH/OPPA, 2011; TDH, 2015 – Includes all drugs and all intents

Since 2001, the State has seen fluctuations in the percentage of increase in drug overdose deaths. Some years, there have been large percentage increases and other years, the percentage increases have been smaller. The largest percentage increase occurred from 2002 to 2003 when the number of drug overdose deaths grew by nearly 24 percent. In 2008, the actual number reflected a decrease in drug-overdose deaths from the previous year and the first negative percentage increase since 2001. In 2010, the state experienced another double-digit percentage increase in drug-overdose deaths, followed by another dip in percentage increase for 2011. However, percentage increases have been steady for 2012, 2013, and 2014. It should also be noted that the number of drug-overdose deaths has increased yearly since the 2008 drop.

Any increase in the number of overdose deaths due to drugs, however, is concerning. Using 2001 as the base year, drug overdose deaths in Tennessee had doubled by 2005. *By 2014, the number of drug overdose deaths had tripled.* Only once between 2001 and 2014 has the State experienced a decline in the number of overdose deaths due to drugs. The 2008 drug death count was less than the previous year.

Tragically, the State has had more people die from drug overdoses than traffic accidents from 2012 to 2014. (See Table 2 below.) Drug overdose deaths surpassed all violent deaths, including homicides and suicides, for the same time periods.

**Table 2. Tennessee Violent Death Statistics, 2012-2014**

Year	OD	MVA	Homicide	Suicide
2012	1,094	958	456	956
2013	1,166	1,008	405	1,017
2014	1,263	989	376 <sup>a</sup>	948 <sup>b</sup>

Coding: OD = drug overdose deaths; MVA = motor vehicle accidents; \* = data not yet available

Source: TDH, 2015; TDH Press Release, 2015; <sup>a</sup>TDH, n.d.; <sup>b</sup>TSPN.org

A 2014 study using four years of data from the State’s controlled substance monitoring program\* (CSMP) observed the following about drug overdose deaths and prescribing:

- Methadone was linked to the highest risk of death. In most instances, this was the methadone dispensed at retail pharmacies and prescribed for control of pain.
- Most overdose decedents are male, despite more females receiving opioid prescriptions. It has been hypothesized that men more than women are likely to use prescription drugs nonmedically and by non-oral routes.
- Nonmedical use of prescription painkillers is correlated with receiving TennCare and being of lower socioeconomic status.
- Hydrocodone and oxycodone were the most commonly prescribed opioids.
- The highest prescribing rates were reported for rural communities.
- After 2007, primary care physicians accounted for most of the opioids prescribed in the State. Prescription rates for surgeons and dentists tended to remain consistent (Baumblatt et al., 2014).

*\*The controlled substance monitoring program (CSMP) may also be referenced as the prescription drug monitoring program (PDMP) or controlled substance monitoring database (CSMD) in this document.*

## Drug Overdose Strategies and Interventions

In 2010, Tennessee demonstrated rates higher than the national average in sales of opioid pain relievers (OPR) with a rate of 11.8 compared to 7.1 for the nation. The State was among the five with the highest levels of OPR sales. In fact, the State tied for second highest with Nevada (Chakravarthy, Shah, & Lotfipour, 2012). Tennessee also ranked eighth highest in drug overdose mortality rate in the United States in 2010. However, the State has implemented diverse strategies

aimed at reducing prescription drug abuse as well as improving drug overdose statistics (TFAH, 2013).

A 2013 Issue Report assessed states on a series of 10 indicators for a range of evidence-informed policies in place. These strategies were a snapshot of efforts that states were taking to reduce prescription drug misuse. The indicators were selected based on consultation with leading medical, law enforcement, and public health experts about the most promising approaches. Each state received a score on each of the indicators, one point for achieving an indicator and zero points if they did not. Hence, zero was the lowest possible overall score and 10 was the highest possible score. A total score of zero meant that a state had no policies in place and a total score of 10 reflected the state had all policies in place ((TFAH, 2013).

New Mexico and Vermont achieved the highest overall score on the indicators (i.e., 10) and South Dakota demonstrated the lowest score for any state with 2. Indicators included: 1) a doctor shopping law (Does the state have a doctor shopping statute?); 2) good Samaritan law (Does the state have a law in place to provide a degree of immunity from criminal charges or mitigation of sentencing for a person seeking help for himself/herself?); 3) prescription drug monitoring program [PDMP] (Does the state have an operational PDMP? ); 4) mandatory use of PDMP (Does the state require any form of mandatory use requirement of PDMPs by providers?); 5) prescriber education requirement (Does the state recommend or require education for prescribers of pain medications?); 6) support for naloxone use (Does the state have a law in place to expand access to, as well as use of, naloxone, given by nonmedical persons, for people who are overdosing?); 7) physical exam requirement (Does the state require a healthcare provider to conduct a screening for signs of substance use, a physical exam of the patient, or that there be an established patient-physician relationship which includes an examination by a physician prior to prescribing prescription medications?); 8) support for substance abuse services (Has the state expanded Medicaid under the Affordable Care Act, thereby expanding coverage of substance abuse treatment?); 9) identification requirement (Does the state have a law permitting or requiring a pharmacist to ask for identification prior to dispensing a controlled substance?); and 10) pharmacy lock-in program (Does the state's Medicaid plan have a pharmacy lock-in program that requires persons suspected of misusing controlled substances to use a single prescriber and pharmacy?) (TFAH, 2013).

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**Tennessee was one of five states to achieve a score of seven out of 10 on the prescription drug policy indicators (TFAH, 2013).**

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*Tennessee was one of five states to achieve a score of seven out of 10 on the prescription drug policy indicators.* At the time, the three indicators for which we had no policies in place were:

1. Substance abuse treatment – Medicaid expansion
2. Immunity law – Good Samaritan
3. Immunity Law – Allow use of naloxone (TFAH, 2013).

Since the Report, Tennessee has addressed two more of the policy indicators. In July 2014, the State became the 18th to pass and support a "Good Samaritan" civil immunity law focused on the



lifesaving medicine Naloxone. Naloxone is an opioid antagonist that reverses the effects of an opioid overdose. Effective July 1, 2014, the four key components of the legislation are as follow:

1. Immunity from civil suit is granted to providers who prescribe naloxone to a patient, family member, or other person in a position to assist giving the medication.
2. It gives the TDH time to provide training and instruction on how to use naloxone.
3. Prospective providers are required to receive basic instruction, including taking a quiz and printing the certificate, on how to give naloxone.
4. The person acting as the "Good Samaritan" is granted civil immunity for administering the medicine to someone they reasonably believe is overdosing on an opioid (TDH, n.d.).

Thus, physicians are allowed to prescribe naloxone to a person at risk of overdose or a friend, family member, or other person in a position to help (CLADD, 2014). First responders, as notified by calling the emergency number 911, should also be called immediately if an overdose is suspected. Calling 911 may increase the chances that the person overdosing will survive (TDH, n.d.). This call should be made in addition to any intervention involving naloxone (i.e., Narcan).

*The State further obtained a “green” rating for the pain clinic law and PDMP.* Green was the best of three rating options and indicated that the policy or practice was established in accordance with expert recommendations and/or supporting evidence. Tennessee’s pain clinic law met selected criteria as of July 2013. Pain clinic laws received a green rating in the Prevention Status Report (PSR) if the law required state oversight and contained other requirements concerning ownership and operation of pain management clinics, facilities, or practice locations. The State achieved a green rating for our PDMP because it incorporates all three indicated best practices: 1) provides prescribers and dispensers access to PDMPs; 2) is interoperable with a PDMP of the District of Columbia or at least one other state; and 3) proactively reports findings to regulatory agencies and law enforcement (CDC, 2014b).

The National Safety Council’s Prescription Nation Report (2016) focused on six key indicators that states should meet to help prevent overdose deaths from prescription drugs. These indicators include: 1) mandatory prescriber education; 2) opioid prescribing guidelines; 3) eliminating pill mills; 4) prescriptions drug monitoring programs (PDMPs); 5) increased access to naloxone; and 6) availability of opioid use disorder (OUD) treatment. States were evaluated on each of the indicators and rated as “Making Progress”, “Lagging Behind”, or “Failing”. Meeting these indicators required

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**Tennessee is one of only four states to achieve this (“Making Progress”) rating (NSC, 2016).**

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strengthening of laws and regulations around prescription drug abuse. States rated as “Making Progress” had to meet at least five of the six indicators, and *Tennessee is one of only four states to achieve this rating.*

The other three states were Kentucky, New Mexico, and Vermont. All states rated as “Making Progress” met five of the six indicators. Sadly, three states did not meet any of the six indicators (NSC, 2016).

### ***Tennessee’s Prescription Drug Monitoring Program (PDMP).***

The State's prescription drug monitoring program (PDMP) became operational in 2006 (Baumblatt et al., 2014; CDC, 2014a). Being operational meant that entities dispensing prescription medications were collecting and submitting data to the PDMP in a timely fashion and that persons authorized by law might access and submit requests to obtain PDMP data for a legally authorized purpose (WDSPPS, 2011). Hence, these operational programs had the capacity to receive and distribute controlled substance prescription information to authorized users (DEA/ODC, 2016).

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**The State's prescription drug monitoring program (PDMP) became operational in 2006 (Baumblatt et al., 2014; CDC, 2014a).**

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PDMPs, sometimes referenced as CSMPs (or CSDs), are state-run electronic databases used to track prescribing and dispensing of controlled prescription medications to patients. They afford the opportunity to quickly identify "problem" prescribers and persons misusing drugs, not only stopping overt attempts at doctor shopping but allowing for better treatment of persons with pain and substance dependence. PDMPs further quickly help identify inadvertent prescribing of similar medications by multiple physicians or inadvertent misuse by service recipients (Blumenschein et al., 2010; Chakravarthy et al., 2012; TFAH, 2013). Our State's PDMP is housed in and operated by the Board of Pharmacy (Blumenschein, 2010). As of this writing, 49 states, the District of Columbia (DC), and one U.S. territory (Guam) have legislation authorizing the creation and operation of a PDMP and all but the DC program are operational (ASPE, 2015). Missouri is the only state that has not passed legislation to establish and operationalize a PDMP (DEA/ODC, 2016; PDMPITAC, n.d.; Urick, 2015).

Before the PDMP, it was easy for patients to walk into a physician's office needing help with anxiety or pain and then walk back out with a prescription for a 90-day supply of Xanax or Vicodin, for example. The PDMP requires that patients face a series of hoops to get pain analgesics, anti-anxiety medication, and/or other controlled substances (Belz, 2014).

The PDMP has been identified as a critical strategy in the reduction of prescription drug misuse (ASPE, 2015; Hansen, 2015; Chakravarthy et al., 2012). Tennessee was highlighted as one of the "State Successes" in CDC's *VitalSigns* in 2014. The article noted that we took action in 2012 requiring prescribers to check our PDMP (or CSMP/CSD) before-prescribing opioid medications and that initial results were extremely favorable. By 2013, the State had demonstrated a 36 percent decline in the number of persons who were seeing multiple prescribers to obtain the same medications and ultimately put them at higher risk of overdose (CDC, 2014a).

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**Tennessee was highlighted as one of the "State Successes" in CDC's *VitalSigns* in 2014 (CDC, 2014a).**

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### ***Preventing Overdose (After the Fact).***

Poisoning became the leading cause of injury death in the U.S. in 2008 and nearly 90 percent of these deaths were caused by drugs. Thus, reduction of fatal poisonings became a *Healthy People 2010* objective and was retained in *Healthy People 2020*. Drugs, legal and illicit, caused nearly 90 percent of the poisoning deaths (Warner, Chen, Makuc, Anderson, & Miniño, 2011).



### *Drug Poisoning Deaths*

Many strategies to prevent accidental drug overdoses are simple. For example, all medications including vitamins and over-the-counter medicines should be maintained in a safe, secure place. Preventing unintentional overdose of illicit drugs often requires getting the individual away from access. Having family and friends to assist with medication therapy and lend social support are also necessary and useful strategies to help substance users stay clean and safe (Anker, 2014).

The person's doctor, local poison center, or emergency department (ED) of a local hospital may be able to help determine the seriousness of a suspected drug overdose. Calling 911 may be more efficient. If symptoms after the drug overdose, immediate attention should be sought. To the extent possible, provide accurate information about the specific name of the drug, amount of the drug ingested, and time when the drug was taken. If prescription or over-the-counter medication is involved, the bottle the drug came in likely will have the information needed (Anker, 2014).

Individuals are not expected to know when a drug overdose is serious. Sometimes you may be able to reach a qualified medical professional by phone to discuss the overdose; other times it may be more prudent to take the person who has overdosed to the nearest hospital ED or medical facility. Appropriate caution must be taken when dealing a drug overdose. Each individual responds differently and reactions are difficult to predict. Some individuals that are directed to go to the ED may not develop physical signs of poisoning. Others may become quite ill. Calling 911 will ensure that a person who is unwilling to get medical assistance receives the necessary services. Family members and friends can sometimes be helpful in encouraging the person to seek medical care. It will be especially helpful for anyone with the person who overdoses to find all medication, chemical containers, paraphernalia, etc., and take them to the medical source (Anker, 2014). This may be extremely difficult or uncomfortable when illicit drugs are involved in the overdose. Emergency medical services responding to a 911 call may be more helpful in such situations.

Volkow (2014) has pointed to the contribution of nonmedical use of opioids, including heroin and prescription pain relievers, in the upward trend in poisoning overdose deaths over the last few decades. Individuals experiencing an opioid overdose typically exhibit symptoms known as the 'opioid overdose triad':

- Pinpoint pupils (i.e., pupils that are abnormally constricted)
- Respiratory depression (i.e., a decreased rate of breathing)
- Unconsciousness (WHO/UNODC, 2013)

Experts recommend that prevention of opioid overdose deaths focus on strategies that target 1) high-dosage medical users and 2) persons who seek care from multiple doctors, receive high doses, and are likely involved in drug diversion (CDC, 2012). As previously mentioned, Tennessee has already implemented many of the recommended strategies and interventions that can assist in reducing the number of opioid-related deaths, including legislating immunity laws and Naloxone for use during overdose situations.

The opioid antagonist Naloxone is typically recommended in the event of an opioid overdose. Naloxone only has a 30-minute-half-life so more than a single dose will be needed (Kreek et al., 2010). Naloxone has been available in an injectable formulation since 1971; however, its use was restricted to medical emergency personnel. In April 2014, the Food and Drug Administration (FDA) approved a hand-held auto-injector. It was developed to reverse the effects of an overdose and was specifically designed for administration by caregivers, family members, or co-workers. As

designed, the product could be used to automatically give a subcutaneous or intramuscular injection of 0.4 mg Naloxone, marketed as Evzio, by simply holding it to an individual's thigh, even over clothing (Preda, 2014; Volkow, 2014). There are voice and visual instructions, as well as directions to seek emergency medical care immediately following use (MedlinePlus, 2014; Preda, 2014).

Tennessee passed legislation allowing physicians to prescribe Naloxone, an antidote to narcotic overdoses, effective July 1, 2014. Tennesseans are encouraged to talk with a health care provider about learning how to administer Naloxone in the event a friend or loved one experiences an opioid overdose (Wilemon, 2014). TDMHSAS Commissioner E. Douglas Varney acknowledged the successes of Naloxone availability as a life-saving remedy for persons who overdose on opioids during his abuse-deterrent opioid workgroup meetings (TDMHSAS, 2015). Dr. John Dreyzehner, commissioner of the Tennessee Department of Health, also noted that deaths can be prevented in many opioid overdoses through Naloxone administration. He points out that almost immediately after administration the deadly effects of opioids are reversed, which allows time to reach further medical treatment (Wilemon, 2014). Whenever naloxone is administered, 911 should be called as quickly as possible because the antidote provides only temporary reversal of an overdose. First responders should be informed that naloxone has been administered and given the empty device(s) that have been administered. This action will help greatly the responders with their life-saving efforts (TDH, 2015).

Some states had implemented off-label use of a nasal Naloxone (Narcan) delivery service, issuing naloxone rescue kits in communities with high rates of opioid deaths.

Results showed reductions in opioid overdose death rates in the targeted communities (Walley et al., 2013).

**On November 18, 2015, the FDA announced approval of NARCAN® Nasal Spray for the emergency treatment of suspected or known opioid overdose** (FDA, 2015). Until that time, Narcan only had Fast Track designation by the FDA (Vermes, 2014). The Narcan formulation is a ready-to-use, needle-free, unit-dose opioid overdose antidote that can easily be used by an overdose victim, companion, or wider range of first responders (e.g., police) in the event of an emergency. Product development had National Institute on Drug Abuse (NIDA) support (Volkow, 2014) and the fast-tracking designation was a positive sign that approval would be forthcoming. (Fast tracking was an exciting first step toward accelerating the commercialization of a simple, ready-to-use treatment needed to address the growing epidemic of opioid overdose.) Narcan has many significant benefits, including reducing the risk of infection to medical personnel given that many heroin users have hepatitis or HIV (Vermes, 2014). No assembly or priming is required prior to use. Otherwise, general caveats about use are similar to those for the auto-injector device (Maginn, 2015).

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**On November 18, 2015, the FDA announced the approval of NARCAN® Nasal Spray for the emergency treatment of suspected or known opioid overdose (Maginn, 2015).**

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TDH has information on Tennessee's Narcan laws as well as online training at <http://tn.gov/health/topic/information-for-naloxone> (TDH, 2015). A half of a vial of Narcan should be squirted into each nostril of the overdosing person. Pushing the applicator fast will help to create a fine mist as liquid drops will not be absorbed in the nose and will not work. Nasal naloxone is given with a foam tip (nebulizer, adapter or atomizer) that is put on a syringe and then placed into the nostril. It will not work when given in any other way. Common signs of opioid overdose include: inability to be awakened; slow, shallow breaths; gray or blue lips or skin; or noisy, weird breathing. These are signs that an individual is in trouble and may stop breathing soon. Immediate action is necessary, including calling 911. Some people may awake disoriented or agitated after receiving Naloxone. Know that this response is a good sign, but that calling 911 is still very

important to help the person survive. There is further a video on how to use the Narcan nasal spray at <http://www.narcannaspray.com/nns-4-mg-dose/how-to-use-nns/#video>. The Narcan link provides answers to frequently asked questions as well as important safety information.

### ***Opioid Overdose Toolkit.***

In 2013, the Substance Abuse and Mental Health Service Administration (SAMHSA) released its *Opioid Overdose Prevention Toolkit*. As indicated by its name, the document was designed to provide information, education, and resources about opioids and opioid overdosing to key individuals, including the person experiencing the overdose. The toolkit was revised in 2014. Topics include:

- Facts for Community Members
- Five Essential Steps for First Responders
- Information for Prescribers
- Safety Advice for Patients & Family Members
- Recovering from Opioid Overdose (SAMHSA, 2014).

The toolkit also describes circumstances under which individuals may not respond to naloxone. For example, the toolkit mentions that persons who have overdosed on buprenorphine may not respond to naloxone. Additionally, the toolkit contains general information, such as encouraging persons involved to call 911, which will be applicable in overdose situations involving any substance (SAMHSA, 2014). The toolkit can be downloaded at no charge from [http://store.samhsa.gov/shin/content//SMA14-4742/Overdose Toolkit.pdf](http://store.samhsa.gov/shin/content//SMA14-4742/Overdose_Toolkit.pdf).

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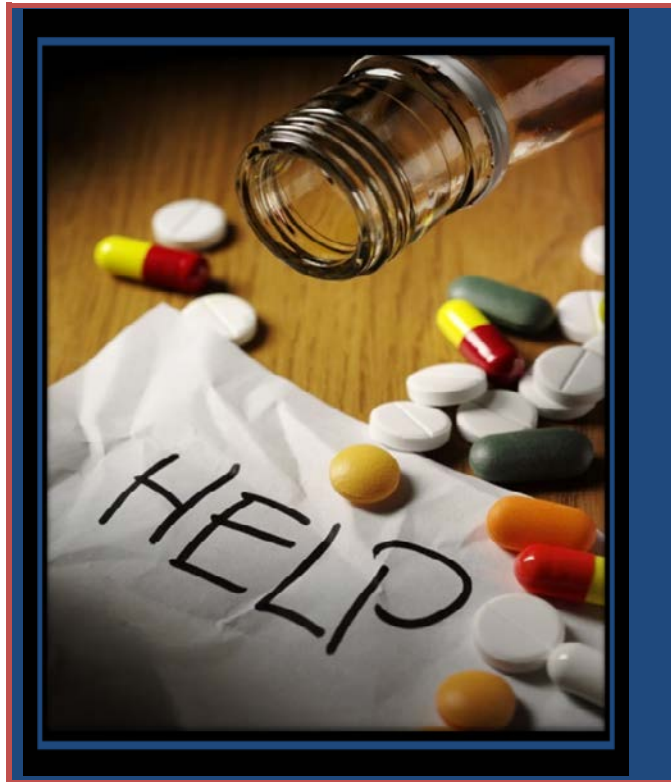
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Department of  
**Mental Health &  
Substance Abuse Services**



8/15/2016

**Substance Use Best Practice Tool  
Guide**

**RECOVERY SUPPORT  
SERVICES**

Division of Clinical Leadership in Collaboration with the  
Division of Substance Abuse Services

# Recovery Support Services

## What is Recovery?

Recovery is a very complex process, requires long-term commitment, and is not exempt from vulnerabilities (HHS, 1999). It has been defined as the change process through which people enhance their health and wellness, live a self-directed life, and strive to reach their full potential. This process of change that underlies recovery hinges on ten guiding principles (SAMHSA, 2012).

1. **Recovery emerges from hope.** The individual has to believe that recovery is real and that people can and do overcome the external and internal barriers challenges, and obstacles that they will encounter. Hope must be internalized and can be fostered by many possible sources, including families, friend, peers, providers, etc. Hope is the driver of the recovery process.
2. **Recovery is person-driven.** Self-direction and self-determination are the foundations for recovery as people define their own life goals and design their distinct path(s) toward those goals. Individuals enhance their independence and autonomy to the greatest extent possible by controlling, exercising, and leading choice over the services and supports that help their resilience and recovery. This empowers them and provides resources necessary to make informed decisions, build on their strengths, initiate recovery, and gain or regain control over their lives
3. **Recovery occurs through many pathways.** Individuals have unique issues that affect and determine their pathway(s) to recovery. Recovery is built on the multiple capacities, talents, coping abilities, strengths, resources, and inherent value of each individual and its pathways are highly personalized. These pathways may include professional clinical treatment; use of medications; support from families; support in schools and communities; faith-based approaches; peer support; and other approaches. Recovery is definitely not linear. Instead it is characterized by continual growth and improved functioning that may involve setbacks. Thus, it is essential to foster resilience for all individuals and their families. In some cases, recovery pathways can be enabled by creating a supportive environment. This is especially true for children, who may not have the developmental or legal capacity to set their own course.
4. **Recovery is holistic.** Recovery comprises an individual's whole life, including body, mind, spirit, and community. This includes addressing: self-care practices, family, housing, employment, education, clinical treatment for mental disorders and substance use disorders, transportation, services and supports, primary healthcare, dental care, alternative and complementary services, faith, spirituality, creativity, social networks, and community participation. The array of available services and supports should be coordinated and integrated.

5. **Recovery is supported by peers and friends.** Mutual support and mutual aid groups, including the sharing of experiential knowledge and skills, as well as social learning, play an invaluable role in recovery. Peers encourage and engage other peers and provide each other with a vital sense of belonging, valued roles, supportive relationships, and community. By helping others and giving back to the community, individuals can help themselves. Peer-operated services and supports provide important resources to help people along their journeys of recovery and wellness. Of course, professional support plays an important role in the recovery process, providing clinical treatment and other services that support individuals in their chosen recovery paths. However, peer supports for families are very important, especially for children with behavioral health problems, and can also play a supportive role for youth in recovery.
6. **Recovery is supported through relational and social networks.** An important factor in the recovery process is the presence and involvement of people who believe in the ability of an individual to recover; who offer hope, encouragement, and support; and who also suggest resources and strategies for change. Family members, peers, providers, faith groups, community members, and other supporters form vital support networks. These relationships help people leave unhealthy and/or unfulfilling life roles behind and engage in new roles (e.g., partner, caregiver, friend, student, employee) that lead to a greater sense of personhood, belonging, empowerment, social inclusion, autonomy, and community participation.
7. **Recovery is culturally-based and influenced.** Culture and cultural background in all of its diverse representations—including values, traditions, and beliefs—are critical in determining a person’s journey and unique pathway to recovery. Services should be culturally grounded, sensitive, attuned, congruent, and competent, as well as personalized to meet each individual’s unique needs.
8. **Recovery is supported by addressing trauma.** Experiencing trauma is frequently a precursor to or associated with substance use, mental health problems, and related issues. Services and supports must be trauma-informed to foster safety (emotional and physical) and trust, as well as promote choice, collaboration, and empowerment.
9. **Recovery involves individual, family, and community strengths and responsibility.** Individuals, families, and communities have resources and strengths that serve as a foundation for recovery. Additionally, individuals have a personal responsibility for their own self-care and journeys of recovery. Individuals need to be supported in speaking for themselves. Families and significant others have responsibilities to support their loved ones, and especially the children and youth in recovery. Communities have responsibilities to provide resources and opportunities to address discrimination and to foster recovery and social inclusion. Individuals in recovery also have a social responsibility and should be able to join with peers to speak collectively about their strengths, wants, desires, needs, and aspirations.

10. **Recovery is based on respect.** Community, systems, and societal acceptance and appreciation for individuals affected by substance use and mental health problems, including protecting their rights and eliminating discrimination, are also crucial in the achievement of recovery. There is a need to acknowledge that taking steps towards recovery may require great courage. Self-acceptance, developing a positive and meaningful sense of identity, and regaining belief in one's self are particularly important (SAMHSA, 2012).

SAMHSA identified four essential dimensions that support a life in recovery. Those dimensions are:

#### **HOME.**

- ✓ Every individual seeking recovery from substance use needs a safe and stable place in which to live.

#### **PURPOSE.**

- ✓ Recovery requires that individuals have meaningful daily activities such as a job, schools, family caretaking, volunteerism, or creative endeavors, and the independence, resources, and income to participate in society.

#### **HEALTH.**

- ✓ Individuals must either manage and/or overcome their symptoms or disease—abstaining from use of illicit drugs, alcohol, and/or non-prescribed medications if there is a problem with addiction—and for every person in recovery, they must make informed, healthy choices that support their emotional and physical wellbeing.

#### **COMMUNITY.**

- ✓ Also required are social networks and relationships that provide support, love, friendship, and hope (MDHS/ADAD, 2013).

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Recovery from a substance use disorder is more the norm than the exception (White, 2012).

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Recovery from a substance use disorder is more the norm than the exception anomaly. For adolescents the average recovery/remission rate following addiction treatment was 35 percent for studies conducted since

2000. For adults who once met lifetime criteria for substance use disorders, an average of 53.9 percent no longer met the criteria in studies conducted since 2000 (White, 2012).

## Recovery Model

The developmental model is one widely accepted model of recovery. It identifies six states that persons who are addicted must go through to achieve long-term recovery (HHS, 1999).

1. **Transition** – The time needed for the person addicted to substances to come to the realization that safe use of alcohol or other substances for them is not possible.

2. **Stabilization** – The period during which the addicted person experiences physical withdrawal and/or other medical problems and learns how to separate from people, things, and places that encourage the substance use/abuse.
3. **Early recovery** – During this period, the individual faces the need to establish a substance-free lifestyle and build relationships that support long-term recovery.
4. **Middle recovery** – This is the time for development of a balanced lifestyle and involves acknowledgment that repairing past damage is important.
5. **Late recovery** – In this phase, the individual identifies and changes faulty beliefs about oneself, others and the world that promoted or caused irrational thinking.
6. **Maintenance** – This phase encompasses the lifelong process of continued growth, development, and management of routine life problems (HHS, 1999).

## Recovery Supports

### The Role of Faith-Based Entities.

Faith-based institutions have long played a role in recovery from substance use. The Salvation Army, Lutheran Social Service, and Catholic Charities, e.g., the three largest providers of faith-based addiction treatment, have extensive and successful histories in helping persons with substance use issues and their families. The Substance Abuse and Mental Health Services Administration (SAMHSA) has actively supported and engaged faith-based entities in behavioral health services, including substance use, since 1992 (SAMHSA, 2015). President George W. Bush expanded the ability of faith-based entities to develop addiction treatment programs when he signed an executive order on January 29, 2001, removing obstacles that kept such organizations from applying for Federal funds. President Bush reaffirmed his commitment to provide resources of the Federal government to faith-based organizations for addiction treatment programs in his 2003 State of the Union address (Gorski, 2001).

Faith-based entities are among the SAMHSA grantees in the Community Substance Abuse Prevention Partnership Program. They can receive funding through the block and formula grant program as well as receive training and curricula materials around substance use issues. In fact, SAMHSA was the first Department of Health and Human Services agency to undertake an initiative aimed at the faith-based community (SAMHSA, 2015).

A number of individuals with substance use problems may gravitate toward clinics affiliated with faith-based institutions for treatment so they can incorporate spirituality into their recovery. Data from the National Survey of Substance Abuse Treatment Services (N-SSATS) provides descriptive information about these facilities (addiction.com, 2014).

Faith-based substance use treatment facilities tend to be privately operated, with over 90 percent under the auspices of non-profit organizations. The facilities tend to serve fewer clients on a typical day than their non-faith-based counterparts and most commonly provide outpatient treatment services. Therapeutic and counseling approaches offered by faith-based facilities are very similar to

those offered by non-faith-based facilities and include individual, group, family, and marital or couples counseling. The greatest distinction was the fact that faith-based facilities were more likely to offer treatment to clients who could not afford to pay than non-faith-based facilities (addiction.com, 2014).

Gorski (2001) contends that there are three principles of effective treatment that faith-based entities should follow if their goal is to have a successful, effective addiction program.

1. Be There When the Person with Substance Use Issues Asks for Help.

In many instances, persons with substance use problems do not reach out for help until they have hit bottom, i.e., they are experiencing consequences from their addiction so severe that they are no longer able to manage the pain. Thus, a motivational crisis that is biopsychosocial in nature leads them to seek help. These individuals are able to start to recover because they are physically ill, psychologically impaired, socially dysfunctional, and spiritually bankrupt.

2. Understand the Spiritual Crisis of Addiction.

Persons with substance use problems are in a spiritual crisis when they have lost meaning and purpose in their life. Hence, they are skeptical of anyone who asks that they embrace a spiritual approach in exchange for help in meeting their survival needs. Approach this component carefully; too much push can cause the individual to leave the program and likely fall into relapse.

3. Meet the Spiritual Needs of the Person with Substance Use Problems.

The initial approach should be to provide help to the individual with no expectation of anything in return. This is an unconditional love approach that is very different from the abusive and manipulative relationships that these individuals are accustomed to. Meet the current needs of the individual first. In the words of Father Martin, the Catholic priest who dedicated his pastoral life to helping persons recovering from addiction integrate spiritual principles into their recovery lives, 'Don't give spiritual steak to spiritual infants.'

## **Twelve-Step Programs.**

Twelve-step programs are supports that aid in recovery but do not constitute formal treatment programs (ASAM, 2013). The twelve-step experience creates a sense of community for its members. Programs provide mutual support in getting members to abstinence (Galanter, 2006). Developed more than 65 years ago, these programs provide simple tools for living based on a set of spiritual principles and reliance on the fellowship of women and men who share the experience and offer support as part of a lifelong process of recovery (The Addiction Recovery Guide, n.d.).

These programs are the right type of treatment for substance use issues for many individuals. There are people who will demonstrate success toward recovery if there is a spiritual and/or faith-based component (About Addiction.com, n.d.).



## *Alcoholics Anonymous.*

**Alcoholics Anonymous** (AA) is the oldest of the 12-step programs designed to help individuals on their path to recovery. Members typically describe it as a spiritual fellowship (Galanter, 2006).

A large-scale evaluation of a Twelve-Step Facilitation program designed to boost attendance in AA has shown it as effective as cognitive and motivational techniques and even more effective than those techniques in the achievement of abstinence. Still high-powered studies are lacking, likely due to the fact that there are no membership lists (Galanter, 2006).

## *Narcotics Anonymous.*

**Narcotics Anonymous** (NA) is a non-profit, self-help group based on AA. The goal is to develop a spiritual awakening in each participant (Khodabandeh, Kahani, Shadnia, & Abdollahi, 2012). However, NA is non-religious (West TN Area NA, n.d.). Meetings first occurred in the Los Angeles, California, area. Starting as a small movement in the United States, NA is now well established throughout much of New Zealand, Australia, Western Europe, and much of the Americas. NA materials are available in 41 languages at the time of this writing (na.org, 2012). As in AA, each member is encouraged to embrace a relationship with a higher power and to believe on it. Medications are not components of the program (Khodabandeh et al., 2012).

The only requirement for membership in NA is a desire of the individual to stop using substances. NA has twelve concepts of service which are based on the same concepts for world service as AA. These concepts are the guiding principles for service structure (NA, 2012).

Providing an environment in which addicts can help one another stop using substances and find a new way to live is the only mission of NA. Members are highly encouraged to comply with complete abstinence from all substances, including alcohol. While NA has no opinion on pharmacological treatments such as methadone maintenance program, abstinence is encouraged and members are asked to define what it means to be abstinent from substances for themselves. NA reinforces its recovery-through-abstinence message (West TN Area NA, n.d.).

## *Other Faith-Based Programs.*

### *Celebrate Recovery.*

Perhaps one of the more familiar faith-based recovery programs is **Celebrate Recovery**. Built on the twelve-step philosophy, Celebrate Recovery began in 1993 at the Saddleback Church in Lake Forest, California. In contrast to AA and NA, the program is Christ-centered rather than “higher power-centered”. In fact, it is the only biblically based, twelve-step program in the country (Stone, 2009).

Celebrate Recovery was designed to help individuals struggling with hang-ups, habits, and hurts. Groups are employed, based on the Small Group Guidelines and format. Groups are also gender specific. Face-to-face group participation is required because there are no online Celebrate Recovery groups. Group guidelines are implemented and followed every time (Celebrate Recovery Web site, n.d.). Furthermore, confidentiality and anonymity are required and participants are reminded of these requirements at every session (Stone, 2009).

*Tennessee Department of Mental Health and Substance Abuse Services (TDMHSAS) Faith-Based Recovery Network Initiative.*

The Tennessee Department of Mental Health and Substance Abuse Services (TDMHSAS) has started building a cohesive prevention, treatment, and recovery network with faith-based organizations. This faith-based recovery network initiative was designed to support a common goal of strengthening individuals and families and ultimately restoring communities. The initiative will help expand the capacity of places of worship and fellowship in offering recovery programs for persons that desire to beat their addiction(s) through a spiritual resource. Faith-based entities are very prominent in the state of Tennessee.

- There are over 11,542 faith-based congregations in the state of Tennessee.
- Tennessee has the 10<sup>th</sup> highest number of congregations in the United States.
- In Tennessee, there are 18 congregations per 10,000 people, ranking it 9<sup>th</sup> in the University states (Association of Religion Data Archives [ARDA], 2012).

Following a best-practice model, congregations across the state can join a growing network of recovery congregations who openly support people in recovery. Faith-based entities in this network will agree to do the following:

1. Provide spiritual/pastoral support.
2. View addiction as a treatable disease.
3. Embrace and support people in recovery and walk with them on their journey.
4. Provide a visible outreach in the community.
5. Disseminate recovery information.
6. Host or refer individuals to recovery support groups. (These are usually, but not limited to, Twelve-Step programs.)

Interested entities can go to <https://www.tn.gov/behavioral-health/topic/Faith-Based-Initiatives> to learn about the Faith-Based Recovery Network Certification process. Special certification ceremonies have already been held across the state (TDMHSAS, 2015). At the time of this writing, there are 123 certified faith-based “Recovery Congregations/Organizations” in Tennessee (TDMHSAS, 2016). There are further opportunities for individuals to become faith-based ambassadors. These individuals will serve as a point of contact with TDMHSAS, the contact for recovery support services, and the conduit for information sharing between the churches and organizations that are involved. Information about faith-based ambassadors can be found at <https://www.tn.gov/behavioral-health/topic/Faith-Based-Initiatives> as well.

## Lifeline Peer Project.

Lifeline is an initiative that helps people that want to recover locate and/or start a recovery group meeting in their area/community. Recovery meetings are designed for individuals on their road to recovery from substance use and/or dependence. The meetings are attended by people of like minds who join together to stay sober one day at a time (Lifeline Peer Project, n.d.).

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Lifeline is an initiative that helps people that want to recover locate and/or start a recovery group meeting in their area/community (Lifeline Peer Project, n.d.).

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The initiative was established as an assist in reducing the stigma associated with addiction and increasing access to substance use recovery services like AA and NA meetings. Such meetings can be helpful.

- ✓ ***The meetings provide an opportunity to hear stories of attendees, which can then be evaluated against a person's own experiences.*** Individuals can decide if they have an addiction as well as understand that they are not alone. All kinds of people can be impacted by addiction. The meetings can be a sense of comfort and strength.
- ✓ ***At recovery meetings, people meet and interact with others who are going through similar situations and circumstances.*** Addiction can be an isolating disease but the recovery groups afford the opportunity to reach out and ask for help. Individuals can start to have hope that recovery is possible because they get to hear the stories, successes and failures of others. The meetings provide an atmosphere of learning from others who have been through similar experiences.
- ✓ ***People can learn what others did to recover.*** The meetings allow for open, honest, candid talk with people in recovery. Individuals can discuss their fears and/or concerns. They also get to learn that life without substances can be exciting and fun.
- ✓ ***People will not be judged.*** The people in the recovery group have heard it all before. They have done it all before. They know what it's like to have an addiction. They want to help, not be critical.
- ✓ ***Individuals are reminded of the consequences of using substances.*** After being clean and sober for periods of time, even just 30 days, an individual in recovery will start to feel stronger than he/she has felt in some time. However, that's when the addiction voice will say, "you don't need this support; you can control things on your own". The meetings allow people to re-hear stories of others who relapsed and how that happened. Individuals are also reminded of how they started the process through the stories of others who were just starting their recovery journey. The meetings are important reminders that help to keep people in recovery on the clean and sober path.

- ✓ ***Individuals are reminded of the chronicity of addiction.*** Being addicted to substances is a lot like having diabetes or heart disease. It's never gone, even when you start to feel better. The recovery meetings remind people that they must continually deal with their disease.
- ✓ ***Finally, recovery meetings provide a safe place to go.*** Recovery meetings are a safe harbor when people want and/or need to be out of harm's way. By the end of the meeting, people will almost always feel better and more motivated toward achieving their recovery.

Go to the following link to learn more about the Lifeline Peer Project: <http://tn.gov/behavioral-health/article/lifeline-peer-project>. To find out the location and name of the Lifeline Peer Coordinator in your area/community, click on the link titled Lifeline Peer Project Map. It's worth the click!

## Oxford Houses.

Oxford House is one of the largest examples of a community-based, mutual-help residential community for high risk substance abuse individuals (Jason & Ferrari, 2010). The concept of Oxford Houses began in 1975 in Silver Spring, MD, when attorney Paul Molloy and other residents of then just a halfway house purchased it before it could be sold from under them. Thus, Oxford House, Inc. was born (Craig, 2008). It was established to serve as the next step in the process of substance use recovery, focusing on sober community living at a low cost, effective way to prevent relapse (The Addiction Recovery Guide, 2014). Affiliated houses are financially independent and residents must pay their share of the expenses, including rent and utilities. Thus, residents must have a job or some legal form of income such as a pension. Houses are either all male or all female.

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Commissioner Varney has described Oxford Houses as good examples of high impact, low-cost alcohol and drug abuse services in the state (TDMHSAS, 2013a).

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Today there are more than 1,000 chartered houses in the United States, Australia, and Canada (Craig, 2008). Commissioner Varney has described Oxford Houses as good examples of high-impact, low-cost alcohol and drug abuse services in the state (TDMHSAS, 2013a).

There are nine Oxford House traditions. They are as follow:

1. The primary goal of Oxford House is to provide housing and rehabilitative support for alcohol and other substance addicts who want to stop drinking or using and to stay clean and sober.
2. All oxford Houses must be run in a democratic manner. Officers are deemed as trusted servants who serve for continuous periods not to exceed six months in any one office.
3. Members of Oxford Houses are never asked to leave without cause, which is defined as a dismissal vote by the membership because of disruptive behavior, consumptions of alcohol, or using drugs.

*Recovery Services/Supports*

4. While Oxford House is not affiliated with AA or NA, either financially or organizationally, its members realize that only active participation in those support groups offers assurance of continued sobriety.
5. Each Oxford House is autonomous except in matters that affect other houses or Oxford House, Inc. as a whole.
6. Each Oxford House is financially self-supporting. However, with encouragement or approval of Oxford House, Inc., financially secure houses may provide financially needy or new houses a loan for a term not longer than one year.
7. Oxford House should remain forever nonprofessional. However, individual members may be encouraged to use outside professionals whenever such is likely to enhance recovery from alcoholism.
8. Propagation of the Oxford House, Inc. concept is to always be conceived as public education and never as promotion. Principles should always be placed before personalities.
9. Oxford House members who leave a house in good standing are highly encouraged to become associate members and to offer support, friendship, and example to newer members.

In contrast to other aftercare residential programs, like halfway houses, Oxford House does not have a prescribed length of stay for residents. Moreover, there is no professional staff. To remain in one of the houses, residents only have to abstain from alcohol and/or other drug use, pay rent, contribute to the maintenance of the house, and avoid disruptive behavior (Jason & Ferrari, 2010).

An NIAAA-supported study compared outcomes of Oxford House residents to persons received usual community-based aftercare services. Participants were randomly assigned to conditions. Results were encouraging, revealing significantly reduced recidivism for Oxford House participants 24 months after discharge from residential treatment, compared to usual care participants. Other positive outcomes included higher employment rates, fewer days engaged in illegal activities, and greater percentages of women regaining custody for Oxford House versus usual care participants. The study also examined community reactions to the presence of Oxford Houses and found neighbors had significantly more positive attitudes toward recovery homes, increased support for individuals in recovery to live in residential neighborhoods, increased awareness of their roles in providing a supportive environment for recovery home residents, and increased acceptance of having a self-run recovery home on their block (Jason & Ferrari, 2010).

As of May 4, 2016, our state had 42 Oxford Houses: 11 in West Tennessee, 12 in Middle Tennessee, and 19 in East Tennessee (Oxford House (TN) Web site, 2016). Oxford House Outreach Workers have been hired to locate and establish appropriate housing; recruit and select appropriate recovery house members; submit loan applications; network with the local recovery community groups; and provide ongoing assistance as needed. Workers must be in substance use recovery.

## Addiction Recovery Support Centers.

At the end of state fiscal year 2013, the Department funded three addiction recovery support centers. There is one center per each grand region of the state. Designed for individuals with lived experience in substance use disorders, the centers provide peer-to-peer interactions that support transition from the wait list for admissions to inpatient substance use treatment. These individuals are afforded the assistance they need while in wait. Specialists at the support centers are also available to assist individuals with engagement in 12-step meetings, e.g., AA and/or NA. Other services might include recovery skills groups, relapse prevention, drug testing, case management, and transportation. These latter supports are typically delivered following clinical treatment, but may be provided to persons who have experienced or have a concern about a relapse (TDMHSAS/PPC, FY 2013).

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There is one (addiction recovery) support center per each grand region of the state (TDMHSAS/PPC, FY 2013).

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Within these centers, Peer Wellness Coaches and Peer Leaders implement the *My Health, My Choice, My Life* grant program. It is a holistic health initiative that integrates a medical model with resiliency and recovery, resulting in a program that focuses on overcoming mental and physical health symptoms through strengths, personal empowerment and resiliency. As of December 2013, the program had served 403 persons in East Tennessee, 148 in Middle Tennessee, and 38 in West Tennessee. Evaluation results showed that, overall, participants reported statistically significant improvements in functioning between intake and discharge, which included dealing with crises, controlling their own lives, experiencing fewer symptoms that interfere with their daily lives, and getting along with their families (Mental Health Transformation, 2014). Peer Wellness Coaches coordinate the initiative in their region.

## TDMHSAS Recovery Services

### Case Management.

This service incorporates service coordination to assist the service recipient in identifying, accessing, and organizing resources that support achievement of his/her treatment and recovery goals. Services may be delivered separately or in combination through face-to-face or telephone contact. Case management might be offered by state licensed treatment providers as well as non-licensed recovery support providers (TDMHSAS/DSAS, 2012).

### Drug Testing.

Random drug testing is used to determine the presence of substances. Drug testing is not a stand-alone service and must be done in conjunction with other Tennessee Addiction Recovery Program (TN-ARP) services.

## **Pastoral/Spiritual Support.**

This service includes a variety of addiction recovery support services which incorporate faith and specific religious beliefs and convictions in the addiction recovery process, as well as spiritual practices based on universal spiritual principles and practices. It is designed to assist people in recovery in developing their spirituality and religious practices as an integral part of their addiction recovery and may cover practices and principles such as establishing a relationship with a higher power; identifying a sense of purpose and mission in one's life; achieving serenity and peace of mind; balancing one's body, mind, and spirit; and utilizing spiritual practices such as prayer, scripture, meditation, and yoga. Examples of this service include a meeting involving a person in recovery with a minister, priest, rabbi, imam, monk, or other qualified person to study the application of a religion's beliefs, convictions, and scripture to addiction recovery for support during a crisis or to determine an addiction recovery plan.

If performed in a group setting, group size must be a minimum of two persons and no more than 20. The staff facilitating this service must be trained and qualified according to the agency's governing body. Individual sessions are 50 minutes and group sessions are 60 minutes in duration.

## **Recovery Skills.**

This service is designed to assist the person in recovery in obtaining the necessary skills to be a successful and productive member of the community and offers skill-building topics such as budgeting, parenting, personal growth, and responsible decision making. If performed in a group setting, group size must be a minimum of two persons and no more than 20. The staff facilitating this service must be trained and qualified according to the agency's governing body. Individual sessions are 50 minutes and group sessions are 60 minutes in duration.

## **Screening.**

TN-ARP screening is used to determine whether individuals meet basic eligibility criteria for program services. Providers must use 'TDMHSAS' brief screening instrument. Moreover, the provider's staff must be trained on TN-ARP eligibility criteria and use of the screening instrument.

## **Transitional Housing.**

Sometimes individuals in their treatment and/or recovery phase do not have a place to live. Therefore, some provider agencies make transitional housing available as support. This service, if available, is offered in conjunction with other treatment/recovery services, never as a stand-alone service. Individuals receiving this support are required to remain substance free (TDMHSAS/DSAS, 2014).

## **Transportation.**

Often individuals with substance issues need assistance in getting to treatment and/or recovery services or other activities that support their recovery. Hence, many provider agencies of the



Tennessee Addictions Recovery Program (TN-ARP) Services offer transportation services. To be eligible for this service, the individual must have no other reliable source of transportation, no other payment source for this service, and no public transportation except when using it creates undue hardship (TDMHSAS/DSAS, 2014).

## Relapse Prevention.

This service was designed to help persons in recovery in developing skills to recognize early signs that may result in relapse and to develop techniques that will counteract these triggers. It might be offered in groups ranging from two to 20 persons. Group sessions run 60 minutes and individual sessions run 50 minutes. The service may be offered by either licensed treatment providers or non-licensed recovery support providers (TDMHSAS/DSAS, 2014).

A relapse or “slip”, as some people like to refer to it, does not start when the person resumes using the drug or drinking again. Relapse is a slow process that begins well in advance of actual use (BuddyT, 2016a). Following an extensive cognitive-behavioral analysis of relapse involving 48 episodes, it was revealed that most relapses were associated with three high-risk circumstances: (1)

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Most relapses are associated with social pressure, frustration and anger, and/or interpersonal temptation (About.com Alcoholism, n.d.).

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social pressure; (2) frustration and anger; and/or (3) interpersonal temptation. Some researchers have investigated the effectiveness of skills-training interventions that help alcoholics as well as other substance users cope with relapse risk.

Individuals learn problem-solving skills and rehearse alternative behaviors when specific high-risk behaviors might be encountered, hence providing a useful component of a multimodal behavioral approach to prevent relapse. The importance of considering dependence severity as a critical factor in both behavioral and pharmacological prevention strategies must also be noted (BuddyT, 2016b).

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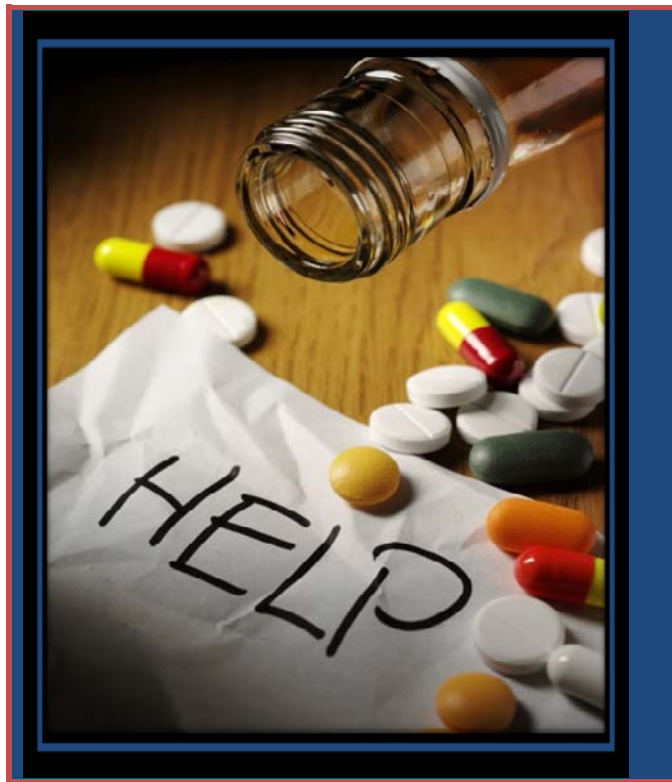
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Department of  
**Mental Health &  
Substance Abuse Services**



8/15/2016

**Substance Use Best Practice Tool  
Guide  
SCREENING TOOLS**

Division of Clinical Leadership in Collaboration with the  
Division of Substance Abuse Services

# Screening Tools

## Screening

Despite the high numbers of individuals with substance use problems, too many go untreated. For many, the disorders are simply not diagnosed. Therefore, screening in primary care offices and other health care settings have been recommended to allow for earlier identification of disorders which can lead to treatment (SAMHSA-HRSA, n.d.). Moreover, the United States Preventive Services Task Force (USPSTF) has recommended that clinicians screen all adults at least 18 years of age for alcohol misuse and, for individuals engaged in hazardous or risky drinking, provide brief behavioral counseling interventions to reduce alcohol misuse, e.g. Misuse involving alcohol is defined as consuming more than the recommended daily, weekly, or per-occasion amounts of alcohol that increase risks for health consequences (USPSTF, 2013).

Screening tests help identify persons who are asymptomatic (without symptoms) but may be at risk for developing a condition or disease. Typically they are used with individuals who are considered to be at high risk. Results from the screening help guide the medical professional in determining whether or not additional tests are needed to confirm his or her hypotheses. For instance a positive screen indicates the possibility that the person may have the condition or disease. A diagnostic test would then be used to confirm screening results (Medical Health Tests, 2012).

Screening	Diagnostic
<ul style="list-style-type: none"><li>* Extremely sensitive cutoff for positive screen, resulting in many false positives</li><li>* Cost usually low</li><li>* Results determine level of risk and need for diagnostic measure</li><li>* Typically non-invasive measures</li><li>* Administered to high risk individuals who are asymptomatic</li></ul>	<ul style="list-style-type: none"><li>* Precisely defined cutoff for positive result</li><li>* Cost more due to accuracy required</li><li>* Yields definitive diagnosis</li><li>* Often invasive</li><li>* Administered to individuals who are symptomatic (i.e., have symptoms)</li></ul>

**\* Characteristics of Screening and Diagnostic Tests**

Source: MedicalHealthTests, 2012

Two concepts that are very relevant to the value of a test are *sensitivity* and *specificity*. Sensitivity refers to the test's ability to correctly identify individuals with the disease, disorder, or condition. A

test that correctly identifies all patients with the disease has 100% sensitivity. A test with 70 % sensitivity detects 70 percent of individuals with the disease, the true positives, but is unable to detect the 30 percent that actually has the disease (the false negatives). Thus, the test says those 30 percent do not have the disease, though they do. The denominator is equivalent to all of the individuals that have the disease. The numerator involves all the people the test says has the disease. In short, sensitive tests have very few false negatives (Attia, 2003; Lalkhen & McCluskey, 2008). High sensitivity is very important if the test will be used to identify a serious yet treatable disease (Lalkhen & McCluskey, 2008).

Specificity, on the other hand, refers to a test's ability to correctly identify individuals that do not have the disease, condition, or disorder. When specificity is 100%, all individuals without the disease have been correctly identified by the test. A test with 70% specificity correctly reports 70 percent of individuals without the disease as test negative (true negatives) but 30 percent of individuals without the condition is incorrectly identified by the test. The denominator is representative of all the people who do not have the condition. The numerator consists of all the people the test says do not have the disease. Hence, a specific test has very few false positives (Attia, 2003; Lalkhen & McCluskey, 2008).

In general, high sensitivity correlates with low specificity, and vice versa (Lalkhen & McCluskey, 2008). Moreover, screening tests should be suitable. They must demonstrate adequate sensitivity and specificity, minimal discomfort when administered, be safe to use, have a reasonable cost, and be easy to administer and acceptable to the test taker and clinician (New York State Department of Health, 1999).

Screening offers a quick way to identify service recipients who need further assessment or treatment for substance use disorders. Look for tools that are brief, particularly for the population of interest, when considering screening instruments. In fact, having a tool that asks just a few simple questions or observations that raises a high index of suspicion should be extremely helpful (Croton, 2007).

## **How to Choose a Screening Tool.**

The American Public Health Association (2008) recommends consideration of the following issues in selecting/using a tool for screening purposes:

- What are the key characteristics of the target population, e.g., ethnic/racial background, age, rural or inner city location?
- Do you need the questionnaire in languages other than English? If so, which ones?
- What kind of time do you have for administering and scoring the tool?
- Do you want to use a tool that the service recipient can complete on his or her own or that must be administered by a staff person?

There are a plethora of screening tools, many of which are in the public domain. Considering the above issues in tool selection should be very useful to the clinician.



## Single Question Screens.

Screening is a highly recommended strategy in the prevention and reduction of substance use and/or abuse. It allows clinicians the opportunity to counsel individuals and, when so indicated, to refer them to appropriate treatment (Smith, Schmidt, Allensworth-Davies, & Saitz, 2010). A primary tool in preventive health care in the United States, screening identifies individuals who are likely to have a disorder, as determined by their answers to certain key questions (NIAAA, 2005).

Time is limited during primary care office visits so practice guidelines in primary care currently recommend use of a single screening question for the detection of unhealthy alcohol use (Smith et al., 2010). This screen starts with the pre-screen question:

“Do you sometimes drink beer, wine, or other alcoholic beverages?” p. 4  
(NIH/NIAA, 2007)

If the above prescreen is positive, it is recommended that the following single question about heavy drinking be asked:

"How many times in the past year have you had:

*Men*

*Women*

5 or more drinks  
per day?"

4 or more drinks  
per day?"

p. 4 (NIH/NIAA, 2007)

The source guide for the aforementioned questions help medical and mental health professionals think about clinical indications for screening as well as setting up a simple process for incorporating this screening (NIH/NIAAA, 2007).

Because of the success of single-questions screeners for alcohol use, a similar technique for drug use screening should be highly considered. The following question was tested (Smith et al., 2010):

“How many times in the past year have you used an illegal drug or used a prescription medication for nonmedical reasons?” p. 1156 (Smith et al., 2010)

The question was asked by a trained interviewer. Sometimes the interviewer was asked to clarify the meaning of “nonmedical reasons”. A response of at least “1” was indicative of positive drug use. Questions about drug-related problems followed up this single question. Results demonstrated that the single question screener was specific and sensitive for the detection of drug use and drug use disorders for primary care patients. This means that the single-question screen provided information comparable to longer instruments (Smith et al., 2010).

Conjoint screens have been proposed for use in general medical settings as well. The TICS, a two-item conjoint screen that asks a single question about drug use and a single question about alcohol use, has also been validated. However, as is true of most conjoint tests, it targets drug disorders, not drug use (Smith et al., 2010).

In general, single screening questions (SSQs) have been recommended in the evaluation of unhealthy drug and alcohol use. In fact, research has found SSQs effective in identifying substance dependence as well as, and in some cases better than, longer screening tools. They have been observed to be useful in screening and preliminary assessment (Saitz, Cheng, Allensworth-Davies, Winter, & Smith, 2014).

Single screening questions (SSQs) have been recommended in the evaluation of unhealthy drug and alcohol use (Saitz, Cheng, Allensworth-Davies, Winter, & Smith, 2014).

## Screening Tools and Resources

### National Institute on Drug Abuse (NIDA) Drug Screening Tool.

Below is the National Institute on Drug Abuse’s (NIDA’s) single question quick screen for use by clinician’s in general medical settings. The screen is based on the aforementioned single-question screen by Smith et al. (2010).

## NIDA Drug Screening Tool

### • Quick Screen

Clinician's Screening Tool for Drug Use in General Medical Settings

In the past year, how often have you used the following?

Alcohol (For men, 5 or more drinks a day. For women, 4 or more drinks a day)

Never  Once or Twice  Monthly  Weekly  Daily or Almost Daily

Tobacco Products

Never  Once or Twice  Monthly  Weekly  Daily or Almost Daily

Prescription Drugs for Non-Medical Reasons

Never  Once or Twice  Monthly  Weekly  Daily or Almost Daily

Illegal Drugs

Never  Once or Twice  Monthly  Weekly  Daily or Almost Daily

An online version of the screening tool can be found at <http://www.drugabuse.gov/nmassist/>. An Application Programming Interface (API) for this tool is also available for developers of Electronic Health Record (EHR) systems. Developer code as well as documentation can be found at [www.drugabuse.gov/developer](http://www.drugabuse.gov/developer).

### Screening for Drug Use in General Medical Settings: Resource Guide.

NIDA developed a *Resource Guide* with screening tools and procedures to be used by clinicians serving adults in general medical settings. It will assist them in conducting screening, brief intervention, and/or treatments referral for persons who may have or be at risk of developing a substance use disorder. This way, clinicians can intervene early and likely enhance medical care through increase awareness of the impact of substance use on the individual's overall health. The guide can be downloaded at no cost from [http://www.integration.samhsa.gov/clinical-practice/sbirt/nida\\_screening\\_for\\_drug\\_use.pdf](http://www.integration.samhsa.gov/clinical-practice/sbirt/nida_screening_for_drug_use.pdf). The document is in the public domain so its contents can be reproduced (NIDA, n.d.).

The resource guide, part of NIDA's Physicians' Outreach Initiative, contains education and information to help medical professionals be successful as the first line of defense against substance abuse and addiction. Also included is a scoring guide for the screening tool as well as sample scripts for use with patients. The tool will help clinicians in the identification of risky substance use in their adult patients. The guide, serves as an aid in providing patient feedback and arranging for specialty care, where necessary, using the five A's of intervention. The five A's comprise the following:

## Screening Tools

- Step 1: **Ask** – Screening is first and involves asking at least one question related to substance use.
- Step 2: **Advise** – Here the medical professional provides strong, direct personal advice to the patient, to make a change if clinically indicated.
- Step 3: **Assess** – Determine the extent to which a patient is willing to change his or her behavior after receiving the clinician’s advice.
- Step 4: **Assist** – The clinician helps the patient make a change if he or she appears to be ready.
- Step 5: **Arrange** – The medical professional refers the patient for further assessment and treatment, if so indicated, and sets up follow-up appointments (NIDA, n.d.).

### Substance Use Risk Profile-Pregnancy Scale.

This tool consists of only three questions that ask about lifetime marijuana use, alcohol use prior to pregnancy, and whether the individual ever felt a need to cut down. Scoring is simple as well. The simplicities of this tool are particularly useful because they allow busy clinicians the opportunity to screen for a variety of substances within a very brief time frame. Moreover, it can be re-administered on multiple occasions with minimal burden to the clinician or the individual. The fact that there is a high risk of relapse during the postpartum period for women with a history of chronic substance use makes the availability of such a tool following delivery very useful (Yonkers, Gotman, Kershaw, Forray, Howell, & Rounsaville, 2010).

1. Have you ever smoked marijuana?
2. In the month before you knew you were pregnant, how many beers, how much wine, or how much liquor did you drink?
3. Have you ever felt that you needed to cut down on your drug or alcohol use? (Lowry, 2010).

Individuals answering “no” to all three questions are deemed to be at low risk of a positive screen for substance use. One “yes” response places a person at moderate risk while responding “yes” to at least two of the three questions places individuals at high risk of having a positive screen for illicit substance or alcohol use. This tool has high sensitivity and acceptable specificity (Lowry, 2010).

## **CAGE and CAGE-AID.**

The CAGE is a substance abuse screener that is quite familiar to clinicians. It is one of the oldest and most popular screening instruments for alcohol abuse around. The CAGE is very brief, consisting of only of four (4) questions for which a single positive response suggests a problem with alcohol. The questions tend to inquire about problems associated with drinking instead of the amount of alcohol consumed. The instrument was likely developed that way because many persons that consume alcohol deny any problems with alcohol. Two “Yes” responses indicate problems with alcohol.

Some researchers argue that the CAGE has limited utility, being most accurate for white males and less valid identifying alcohol abuse in the elderly, white women, and African and Mexican Americans (Buddy, 2010). Further, the CAGE focuses on lifetime use rather than current alcohol consumption.

The fact that the CAGE only dealt with alcohol problems led to the development of the CAGE-AID (CAGE – Adapted to Include Drugs). This tool presents with four (4) questions but this time the questions cover drugs in addition to alcohol conjointly. As with the CAGE, each positive response for the CAGE-AID counts one (1) point. At least one (1) point identifies a positive screen. Both screens are included in these guidelines and available online from <https://www.mhn.com/static/pdfs/CAGE-AID.pdf>.

## CAGE

- C** • Has anyone ever felt you should **C**ut down on your drinking?
- A** • Have people **A**nnoyed you by criticizing your drinking?
- G** • Have you ever felt **G**uilty about your drinking?
- E** • Have you ever had a drink first thing in the morning (**E**ye-opener) to steady your nerves or to get rid of a hangover?

The maximum number of points that can be achieved is seven (7) because the first two items count as two points each. The remaining questions count for one point each. A question either receives the maximum score or the minimum score. For Question 1, a response of “3” or higher value yields the maximum score of two for that question. The other four questions receive the maximum score for each “Yes” response and the minimum score for each “No” response.

***NOTE: The CAGE is in the public domain.***

# CAGE-AID

## CAGE Adapted to Include Drugs (CAGE-AID)

Patient Name: \_\_\_\_\_ Date: \_\_\_\_\_

**Please circle “Yes” or “No” for each question.**

Have you felt you ought to cut down on your drinking or drug use?... Yes ... No

Have people annoyed you by criticizing your drinking or drug use?... Yes ... No

Have you felt bad or guilty about your drinking or drug use? ... Yes ... No

Have you every had a drink or used drugs first thing in the morning to steady your nerves or to get rid of a hangover (eye-opener)? ... Yes ... No

*NOTE: The CAGE-AID is in the public domain.*



## CRAFFT.

**T**he CRAFFT is a brief screening tool for adolescent substance abuse recommended by the American Academy of Pediatrics' Committee on Substance Abuse (CeASAR, n.d.). Designed for use with youth ages 11-21 years of age, the screener consists of three preliminary questions, followed by six easy-to-remember items (MDPH/BSAS, 2009).

**T**itle of the screener is a mnemonic acronym of the issues addressed by the six questions. Letters in the title represent the keyword in each of the six questions: *C* = Car; *R* = Relax; *A* = Alone; *F* = Forget; *F* = Family/Friends; and *T* = Trouble. Youth should respond "YES" or "NO". At least two "YES" responses to the six questions signal a significant problem (CeASAR, n.d.). Mental health and/or health professionals should administer the screening test.

A copy of the CRAFFT is available below and also accessible online from the Center for Adolescent Substance Abuse Research (CeASAR) at

[http://www.ceasar.org/CRAFFT/pdf/CRAFFT\\_English.pdf](http://www.ceasar.org/CRAFFT/pdf/CRAFFT_English.pdf). The online version contains scoring instructions as well as information about scoring relevance to the DSM-IV. No reference to the DSM-5 was available at the time of this writing. Card versions of the CRAFFT are available for request from <http://www.ceasar.org/about/CRAFFT%20Card%20Request%20Form.pdf>.

Currently 13 PDF language versions of the CRAFFT are available at

<http://ceasar.org/CRAFFT/screenCRAFFT.php>. Among the language versions are Chinese, Creole, French, Hebrew, Japanese, Khmer, Laotian, Russian, Portuguese, Spanish, Turkish, Vietnamese, and of course English. A self-administered version, to be administered by the teen, can be accessed from [http://www.ceasar.org/CRAFFT/pdf/CRAFFT\\_SA\\_English.pdf](http://www.ceasar.org/CRAFFT/pdf/CRAFFT_SA_English.pdf).

## CRAFFT Screening Interview

It is suggested that the clinician start with: **“I’m going to ask you a few questions that I ask all my patients. Please be honest.”** (Then ask the following opening questions.)

**Part A**

- **During the PAST 12 MONTHS, did you:**
  - 1. Drink any alcohol (more than a few sips)? (Do not count sips of alcohol taken during family or religious events.) YES NO
  - 2. Smoke any marijuana or hashish? YES NO
  - 3. Use anything else to get high? (“anything else” includes over the counter and prescription drugs, illegal drugs, and things that you sniff or “huff”) YES NO

If the adolescent answers **“YES”** to any of the opening questions, ***administer all six questions in Part B below.*** If the adolescent answers **“NO”** to any of the opening questions, ***administer only the first of the six questions in Part B below.***

**Part B**

	Yes	No
1. <b>C</b> - Have you ever ridden in a <b>CAR</b> driven by someone (including yourself) who was "high" or had been using alcohol or drugs?	___	___
2. <b>R</b> - Do you ever use alcohol or drugs to <b>RELAX</b> , feel better about yourself, or fit in?	___	___
3. <b>A</b> - Do you ever use alcohol/drugs while you are by yourself, <b>ALONE</b> ?	___	___
4. <b>F</b> - Do you ever <b>FORGET</b> things you did while using alcohol or drugs?	___	___
5. <b>F</b> - Do your <b>FAMILY</b> or <b>FRIENDS</b> ever tell you that you should cut down on your drinking or drug use?	___	___
6. <b>T</b> - Have you ever gotten into <b>TROUBLE</b> while you were using alcohol or drugs?	___	___

© Boston Children’s Hospital. All rights reserved. Reproduced with permission, February 2013. CRAFFT cards can be requested from <http://www.ceasar.org/about/CRAFFT%20Card%20Request%20Form.pdf>. For more information, visit <http://www.ceasar.org/CRAFFT/index.php>.

### ***Self Administration and Scoring of the CRAFFT.***

A self-administered version of the CRAFFT is available at [http://www.ceasar.org/CRAFFT/pdf/CRAFFT\\_SA\\_English.pdf](http://www.ceasar.org/CRAFFT/pdf/CRAFFT_SA_English.pdf). Both the screener (on the previous page) and the self-administered version should be scored using the same criteria. ***It should be noted that Part A items and responses determine which Part B items should be administered.***

***Responses to Part B items are used as the primary screening results.  
Scoring follows the pattern below:***

- ***Each “YES” response should receive a score of 1.***
- ***Two or more “YES” responses are indicative of a positive screen and suggest the probability of a significant problem involving substances.***

***Any score of at least 2 indicates a need for additional assessment.***

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## Alcohol Use Disorders Identification Test (AUDIT).

The Alcohol Use Disorders identification Test (AUDIT) was designed to be used to identify individuals with harmful and hazardous patterns of alcohol consumption. Developed by the World Health Organization (WHO) as a simple method of screening for excessive drinking and to assist in brief assessment, it provides a framework for intervention to help risky drinkers cease or at least reduce their alcohol consumption, thereby avoiding the harmful consequences of their drinking. It was designed to be used by health care professionals, but with suitable instructions, the AUDIT can be self-administered or used by non-health care professionals (World Health Organization, 2001). It is currently one of the assessment tools that can be used during SBIRT screening through the Tennessee model.

Alcohol Use Disorders Identification Test (AUDIT)				
<b>Please circle the answer that is correct for you.</b>				
1. How often do you have a drink containing alcohol?				
Never	Monthly or less	Two to four times a month	Two to three times per week	Four or more times per week
2. How many drinks containing alcohol do you have on a typical day when you are drinking?				
1 or 2	3 or 4	5 or 6	7 to 9	10 or more
3. How often do you have six or more drinks on one occasion?				
Never	Less than monthly	Monthly	Two to three times per week	Four or more times per week
4. How often during the last year have you found that you were not able to stop drinking once you had started?				
Never	Less than monthly	Monthly	Two to three times per week	Four or more times per week

6. How often during the last year have you needed a first drink in the morning to get yourself going after a heavy drinking session?				
Never	Less than monthly	Monthly	Two to three times per week	Four or more times per week
7. How often during the last year have you had a feeling of guilt or remorse after drinking?				
Never	Less than monthly	Monthly	Two to three times per week	Four or more times per week
8. How often during the last year have you been unable to remember what happened the night before because you had been drinking?				
Never	Less than monthly	Monthly	Two to three times per week	Four or more times per week
9. Have you or someone else been injured as a result of your drinking?				
No	Yes, but not in the last year	Yes, during the last year		
10. Has a relative or friend, or a doctor or other health worker, been concerned about your drinking or suggested you cut down?				
No	Yes, but not in the last year	Yes, during the last year		
The Alcohol Use Disorders Identification Test (AUDIT) can detect alcohol problems experienced in the last year. A score of 8+ on the AUDIT generally indicates harmful or hazardous drinking. Questions 1–8 are scored 0, 1, 2, 3, or 4 points. Questions 9 and 10 are scored 0, 2, or 4 only.				

Source: NIAAA, 2005.

Administration of the 10-question AUDIT requires approximately two to five minutes. It is the most widely studied for detecting alcohol misuse in primary care settings (USPSTF, 2013).

## Drug Abuse Screening Test (DAST)-10.

For the DAST-10, drug abuse captures any nonmedical use of drugs or the use of prescribed or over-the-counter drugs in excess of the directions. The various classes of drugs may include cannabis (marijuana, hashish), hallucinogens (e.g., LSD), cocaine, stimulants (e.g., speed), solvents (e.g., paint thinner), tranquilizers (e.g., Valium), barbiturates, or narcotics (e.g., heroin). The questions were not designed to include alcoholic beverages (Addiction Research Foundation, 1982).

## Drug Abuse Screening Test, DAST-10

Using drugs can affect your health as well as some medications you make take. Please answer the questions below.

Which recreational drugs have you used in the past year?

- |   |  |
|---|--|
| <input type="checkbox"/> Methamphetamines (speed, crystal)<br><input type="checkbox"/> Cannabis (marijuana, pot, hashish)<br><input type="checkbox"/> Inhalants (glue, aerosol, paint thinner)<br><input type="checkbox"/> Tranquilizers (valium) | <input type="checkbox"/> Cocaine<br><input type="checkbox"/> Hallucinogens (LSD, mushrooms)<br><input type="checkbox"/> Narcotics (heroin, oxycodone, methadone, etc.)<br><input type="checkbox"/> Other _____ |
|---|--|

	0	1
1. Have you used drugs other than those required for medical reasons?	No	Yes
2. Do you abuse more than one drug at a time?	No	Yes
3. Are you unable to stop using drugs when you want to?	No	Yes
4. Have you ever had blackouts or flashbacks as a result of drug use?	No	Yes
5. Do you ever feel bad or guilty about your drug use?	No	Yes
6. Does your spouse (or parents) ever complain about your involvement with drugs?	No	Yes
7. Have you neglected your family because of your use of drugs?	No	Yes
8. Have you engaged in illegal activities in order to obtain drugs?	No	Yes
9. Have you ever experienced withdrawal symptoms (felt sick) when you stopped taking drugs?	No	Yes
10. Have you had medical problems as a result of your drug use (e.g., memory loss, hepatitis, convulsions, bleeding)?	No	Yes

**Scoring of the DAST-10.**

Score Interpretation			
Score Quadrant	Score	Degree of Problems Related to Drug Abuse	Suggested Action
I	0	No problems reported	None at this time
II	1-2	Low level	Monitor, re-assess at a later date
III	3-5	Moderate level	Further investigation
IV	6+	Substantial/severe level	Address problem immediately

Source: *Addiction Research Foundation, 1982; Clinical Tools Inc., 2014*

Administration and scoring of the 10-question DAST takes approximately three minutes. The tool can be used by primary care physicians (PCPs) to assess for potential substance use disorders in all new patients (Clinical Tools Inc., 2014). The DAST-10 is further one of the screens that might be used in SBIRT-TN.



## T-ACE.

Determining a woman's prenatal alcohol consumption can be difficult but clearly identifying women who are drinking during pregnancy is extremely important. However, popular screening instruments may not identify harmful drinking by pregnant women (NIAAA, 2005).

The T-ACE was developed expressly to identify alcohol consumption by women during pregnancy. Based on the CAGE, the instrument has been tested across a variety of obstetric practices and proven to be an efficient and valuable tool for identifying a range of alcohol use, including current prenatal alcohol consumption, pre-pregnancy risk drinking (i.e., more than two drinks per drinking day), and lifetime alcohol diagnoses per the DSM (NIAAA, 2005). Some studies have observed the T-ACE as more effective than other measurements in identifying pregnant women at risk for problem drinking (NIH/NIAAA, 2000).

## T-ACE

**T** (*Tolerance*) How many drinks does it take to make you feel high?

**A** Have people *annoyed* you by criticizing your drinking?

**C** Have you ever felt you ought to *cut down* on your drinking?

**E** (*Eye opener*) Have you ever had a drink first thing in the morning to steady your nerves or get rid of a hangover?

A score of at least 2 is considered positive. Reporting tolerance (the T question) counts 2 points. Affirmative answers to questions A, C, or E count 1 point each (NIH/NIAAA, 2000; NIAAA, 2005).

**UNCOPE.****UNCOPE**

The **UNCOPE** can be used to screen for other drugs in addition to alcohol. Comprised of six (6) questions, it provides a quick and simple way of identifying risk for abuse and dependence on alcohol and other drugs. Developed by Dr. Norman Hoffmann and his colleagues, the UNCOPE has been used in the Comprehensive Assessment and Treatment Outcomes Research (CATOR), the largest independent evaluation of chemical dependency in the United States. Since then, items representing “U” and “P” have revised wording. While either version of the six questions can be used without cost for oral administration in any psychosocial, clinical, or medical interview (Campbell, Hoffmann, Hoffmann, & Gillaspay, 2005), Hoffman tends to use revised “U” and “P” items (Hoffman, n.d.). UNCOPE items are displayed below.

**U** “In the past year, have you ever drank or **used** drugs more than you meant to?”

OR

“Have you spent more time drinking or using than you intended to?” (revised wording)

**N** “Have you ever **neglected** some of your usual responsibilities because of using alcohol or drugs?”

**C** “Have you felt you wanted or needed to **cut down** on your drinking or drug use in the last year?”

**O** “Has anyone **objected** to your drinking or drug use?” (Alternate wording: “Has your family, a friend, or anyone else ever told you they **objected** to your alcohol or drug use?”)

**P** “Have you ever found yourself **preoccupied** with wanting to use alcohol or drugs?”

OR

“Have you found yourself thinking a lot about drinking or using?” (revised wording)

**E** “Have you ever used alcohol or drugs to relieve **emotional discomfort**, such as sadness, anger, or boredom?”

***Scoring of the UNCOPE.***

Questions should be answered “Yes” or “No.” Two or more positive responses indicate possible abuse or dependence and the need for further assessment. “Yes” responses qualify as positive responses.

## *Suggestions for UNCOPE interpretation and feedback to respondent.*

The following scores and recommendations should be based on the highest score or algorithm met. This is only a draft to suggest a model and is not intended to represent the scoring or recommendation criteria to be adopted. Those wishing to provide feedback on the UNCOPE-Plus findings are advised to collect data to validate the appropriateness of the interpretation and feedback based on the population for which the screening is intended.

### *Scoring.*

Alcohol use scale (Items 1-3)

1. Level of use modest (Items 2 + 3 = 0)
2. Use may exceed recommended level  
For males: ((Item 1 = 4 AND Item 2 > 1) OR (Item 1 >1 AND Item 2 > 2))
3. Potentially hazardous use ((Item 1 > 0 AND Item 2 > 2) OR (Item 3 > 1))
4. Potentially harmful level of use (Total of Items 1-3 = 10+) OR (Item 1 > 1 AND Item 2 = 4)) Drug use scale (Item 4)

Diagnostic indications (UNCOPE):

1. No problem indicated (UNCOPE score < 3)
2. Some risk for substance abuse/misuse (UNCOPE score >2)
3. Indications of substance abuse (Items 5 & 7 both positive and total UNCOPE score = 3+)
4. Indications of possible substance dependence (Items 6 & 8 both positive and UNCOPE score = 3+)
5. Strong indication of substance dependence (Items 5-8 all positive and UNCOPE score = 4+)

*Advice.* (Partial feedback statements bolded)

**Drinking seems to be within normal limits** (Alcohol use scale = 1 and UNCOPE score <3)

**Drug use although not frequent may be a source of legal or other problems** (Item 4 = 2; UNCOPE score < 3)

**Comment that drug use seems frequent and should be reduced** (Item 4 > 2)

**Advised to reduce alcohol use** (Alcohol use > 1 and either Item 2 > 1 or Item 3 >1 AND UNCOPE score <3) (For females, Item 2 > 0 may be used as this could indicate possible intoxication)

**Strongly advise to try reducing alcohol use** (Alcohol use score > 2)

**Suggest possible need for counseling for alcohol if unable to reduce alcohol use** (Alcohol use scale > 2 and UNCOPE score > 2); **possible need for counseling for drugs if unable to reduce drug use** (and/or Drug use [Item 4] > 2 and UNCOPE score > 2) **Suggest help to reduce both alcohol and drug use if both previous conditions are met** (i.e., Alcohol use scale > 2 and drug use [Item 4] > 2 and UNCOPE score > 2)

**Suggest an evaluation** ((Alcohol use > 2 and/or Drug use > 2) and UNCOPE score > 3)

**Suggest need for assessment at a treatment provider**

((Alcohol use scale > 3 and/or Drug use [Item 4] >3) and UNCOPE score > 4)

**NOTE:** Developer Norman G. Hoffman, PhD, says both versions of the UNCOPE are in the public domain and can be accessed online.

## UNCOPE Plus.

The UNCOPE Plus is designed to get at frequency and quantity information similar to the DAST and AUDIT (Hoffman, 2012). Developed by Norman G. Hoffmann, PhD, this form may be used for any appropriate noncommercial clinical applications without prior approvals.

## UNCOPE Plus

1. How often do you have a drink containing alcohol?  
(0) Never  
(1) Monthly or less                      (3) 2 to 3 times a week  
(2) 2 to 4 times a month                (4) 4 or more times a week
2. How many drinks containing alcohol do you have on a typical day when you are drinking?  
(0) 1 or 2  
(1) 3 or 4                                      (3) 7, 8, or 9  
(2) 5 or 6                                      (4) 10 or more
3. How often do you have five or more drinks on one occasion?  
(0) Never  
(1) Less than monthly                      (3) Weekly  
(2) Monthly                                    (4) Daily or almost daily
4. How often do you use marijuana, any other drug, or prescription medication to get high?  
(0) Never  
(1) Monthly or less                      (3) 2 to 3 times a week  
(2) 2 to 4 times a month                (4) 4 or more times a week
5. Have you spent more time drinking or using drugs than you intended to?  
(0) No  
(1) Yes
6. Have you ever neglected some of your usual responsibilities because of drinking or using drugs?  
(0) No  
(1) Yes
7. Have you felt you wanted or needed to cut down on your drinking or drug use in the last year?  
(0) No  
(1) Yes
8. Has anyone objected to your drinking or drug use?  
(0) No  
(1) Yes
9. Have you found yourself thinking a lot about drinking or using drugs?  
(0) No  
(1) Yes
10. Have you ever used alcohol or drugs to relieve emotional discomfort, such as sadness, anger, or boredom?  
(0) No  
(1) Yes

**NOTE:** Developer Norman G. Hoffman, PhD, says both versions of the UNCOPE are in the public domain and can be accessed online.

## **Clinical Opiate Withdrawal Scale (COWS).**

The Clinical Opiate Withdrawal Scale (COWS) is a common method of assessing opiate withdrawal levels in individuals who are being monitored for medication-assisted treatment for opioid dependence, as well as for persons in residential treatment settings. The instrument can be used in other types of health care settings where service recipients may experience withdrawal from opioid use. COWS is a clinician-administered scale that contains 11 items. It provides a way of recording scores for various symptoms of opiate withdrawal using a scale from 0 to 4 or 5, depending on the item. The numbers for each item are summed to determine the level of opiate withdrawal. The score should be used to assist the clinician in determining the next course of action for treatment (Opiate.com, n.d.).

A total score of 48 can be obtained on the scale. Scores between 5-12 place the individual in mild opiate withdrawal. Scores between 13-24 signal moderate opiate withdrawal and scores of 25-36 are indicative of moderately severe opiate withdrawal. A score greater than 36 is the worse level and signals severe withdrawal from opiates. The experienced medical team will know where the individual is having difficulty and what treatment should look like given that person's score and other factors (Opiate.com, n.d.).

COWS is in the public domain, with a quality PDF version available at [www.ncbi.nlm.nih.gov/books/NBK143183/bin/annex10-fm3.pdf](http://www.ncbi.nlm.nih.gov/books/NBK143183/bin/annex10-fm3.pdf).

## **Clinician's Screening Tool for Drug Use in General Medical Settings.**

The National Institute on Drug Abuse (NIDA) has a wealth of screening tools for substance abuse that are available at no cost to clinicians. Some of the tools are paper documents that can be downloaded. However, the Clinician's Screening Tool for Drug Use in General Medical Settings is an online instrument. It guides clinicians through a series of questions to identify risky substance use in adult service recipients. There are also accompanying resources to assist in providing feedback and arranging for specialty care, where appropriate, using the five A's of intervention. This online tool is available at [http://www.drugabuse.gov/nmassist/?q=nida\\_questionnaire](http://www.drugabuse.gov/nmassist/?q=nida_questionnaire). Clinicians can read more information about the tool at the site, including instructions and tool development/validation data (NIDA Drug Screening Tool, n.d.).

## Michigan Alcohol Screening Test (MAST).

### MAST

The Michigan Alcohol Screening Test (MAST) is one of the most accurate alcohol screening tests available, effective in identifying dependent drinkers with up to 98 percent accuracy. Questions focus on problems over the patient's/client's lifetime rather than current problems.

1. Do you feel you are a normal drinker?  YES  NO  
("normal" is defined as drinking as much or less than most other people)
2. Have you ever awakened the morning after drinking the night before and found that you could not remember a part of the evening?  YES  NO
3. Does any near relative or close friend ever worry or complain about your drinking?  
 YES  NO
4. Can you stop drinking without difficulty after one or two drinks?  YES  NO
5. Do you ever feel guilty about your drinking?  YES  NO
6. Have you ever attended a meeting of Alcoholics Anonymous (AA)?  YES  NO
7. Have you ever gotten into physical fights when drinking?  YES  NO
8. Has drinking ever created problems between you and a near relative or close friend?  
 YES  NO
9. Has any family member or close friend gone to anyone for help about your drinking?  
 YES  NO
10. Have you ever lost friends because of your drinking?  YES  NO
11. Have you ever gotten into trouble at work because of drinking?  
 YES  NO
12. Have you ever lost a job because of drinking?  YES  NO
13. Have you ever neglected your obligations, family, or work for two or more days in a row because you were drinking?  YES  NO
14. Do you drink before noon fairly often?  YES  NO
15. Have you ever been told you have liver trouble, such as cirrhosis?  YES  NO

## MAST *(continued)*

16. After heavy drinking, have you ever had delirium tremens (DTs), severe shaking, visual or auditory (hearing) hallucinations?  YES  NO
17. Have you ever gone to anyone for help about your drinking?  YES  NO
18. Have you ever been hospitalized because of drinking?  YES  NO
19. Has your drinking ever resulted in your being hospitalized in a psychiatric ward?  YES  NO
20. Have you ever gone to any doctor, [social worker](#), clergyman, or mental health clinic for help with any emotional problem in which drinking was part of the problem?  YES  NO
21. Have you been arrested more than once for driving under the influence of alcohol?  
 YES  NO
22. Have you ever been arrested, or detained by an official for a few hours, because of other behavior while drinking?  
 YES  NO

### **Scoring**

Answered “NO” to Questions 1 or 4: 1 point each

Answered “YES” to Questions 2, 3, 5-22: 1 point each

Total score = 6 or more: Indicative of hazardous drinking or alcohol dependence; further evaluation by a healthcare professional is recommended.

Source: BuddyT. Verywell.com.



## FAST Alcohol Screening Test (FAST).

# FAST

The FAST is specially designed to make a fast assessment of patients/clients for hazardous drinking in busy settings. It focuses on hazardous drinking within the last 12 months. Most patients/clients only have to answer the first question.

### FAST Test

1. How often do you have eight or more drinks on one occasion?

Never  Less Than Monthly  Monthly  Weekly  Daily or Almost Daily

2. How often during the last year have you been unable to remember what happened the night before because you had been drinking?

Never  Less Than Monthly  Monthly  Weekly  Daily or Almost Daily

3. How often during the last year have you failed to do what was normally expected of you because of your drinking?

Never  Less Than Monthly  Monthly  Weekly  Daily or Almost Daily

4. Has a relative or friend, a doctor or other health worker been concerned about your drinking or suggested you cut down?

No  Yes, but not in the last year.  Yes in the last year.

### Scoring

Questions 1, 2 and 3: Never -- 0 points; Less than monthly -- 1 point; Monthly -- 2 points; Weekly -- 3 points; Daily or almost daily -- 4 points

Question 4: No -- 0 points; Yes, but not in the last year -- 2 points; Yes, in the last year -- 4 points

### Analyzing Results

- As a general rule, higher scores are better. Maximum score = 16.
- A total score of 3 indicates hazardous drinking.
- Answer "never" on the Question 1 means person is not a hazardous drinker and remaining questions are not necessary.
- Answer "weekly" or "daily or almost daily" on Question 1 means person is considered a hazardous drinker and you can skip the remaining questions.
- Answer "monthly" or "less than monthly" on Question 1 means the other three questions need to be asked to complete the screening for hazardous drinking.

## IHR 5P's Behavioral Risk Screening Tool

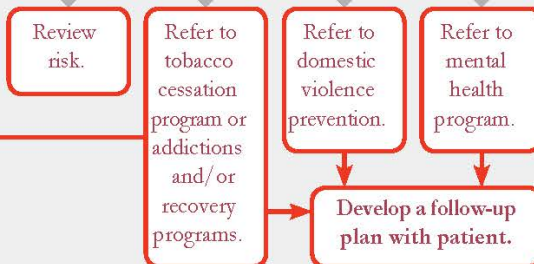
Patient/Client Name \_\_\_\_\_ DOB \_\_\_\_\_  
 Is patient/client pregnant?  YES  NO Gestational Age \_\_\_\_\_ Date \_\_\_\_\_  
 Provider's Name \_\_\_\_\_ Screener's Name \_\_\_\_\_

Women and their children's health can be affected by emotional problems, alcohol, tobacco, other drug use and violence. Women and their children's health are also affected when these same problems are present in people who are close to them. **Alcohol includes beer, wine, wine coolers, liquor and spirits.** Tobacco products include cigarettes, cigars, snuff and chewing tobacco.

1. Did any of your parents have a problem with alcohol or other drug use?	<b>PARENTS</b>	<input type="checkbox"/> YES	<input type="checkbox"/> NO
2. Do any of your friends have a problem with alcohol or other drug use?	<b>PEERS</b>	<input type="checkbox"/> YES	<input type="checkbox"/> NO
3. Does your partner have a problem with alcohol or other drug use?	<b>PARTNER</b>	<input type="checkbox"/> YES	<input type="checkbox"/> NO
4. In the past, have you had difficulties in your life due to alcohol or other drugs, including prescription medications?	<b>PAST</b>	<input type="checkbox"/> YES	<input type="checkbox"/> NO
5. Check YES if she agrees with any of these statements. - In the past month, have you drunk any alcohol or used other drugs? - How many days per month do you drink? - How many drinks on any given day? - How often did you have 4 or more drinks per day in the last month?	<b>PRESENT</b>	<input type="checkbox"/> YES	<input type="checkbox"/> NO
6. Have you smoked any cigarettes or used any tobacco products in the past three months?	<b>TOBACCO</b>	<input type="checkbox"/> YES	<input type="checkbox"/> NO
7. Over the last few weeks, has worry, anxiety, depression, or sadness made it difficult for you to do your work, get along with other people, or take care of things at home?	<b>EMOTIONAL HEALTH</b>	<input type="checkbox"/> YES	<input type="checkbox"/> NO
8. Are you currently or have you ever been in a relationship where you were physically hurt, choked, threatened, controlled or made to feel afraid?	<b>VIOLENCE</b>	<input type="checkbox"/> YES	<input type="checkbox"/> NO

### FOR PROVIDER USE

Brief Intervention/Brief Treatment	Y	N	NA
Did you <b>State</b> your medical concern?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Did you <b>Advise</b> to abstain or reduce use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Did you <b>Check</b> patient's reaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Did you <b>Refer</b> for further assessment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Did you <b>Provide</b> written information?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



Moderate drinking for non-pregnant women is one drink per day. Women who are pregnant or planning to become pregnant should not use alcohol, tobacco, illicit drugs or prescription medication other than as prescribed.

## Structured Clinical Interview for DSM-5 (SCID-5).

The Structured Clinical Interview for DSM-5 (SCID-5) is a great assessment instrument for identifying substance use disorder (SUD), as well as other DSM-5 psychiatric disorders. As a structured clinical interview, the instrument covers a broad range of illnesses, most of which the patient/client probably may not have. Questions on the SCID range from asking about family and medical history to illnesses and current complaints. Moreover, the questions get very detailed and specific and inquire about the nature, severity and duration of symptoms. Thus, the SCID can assist in determining if a patient/client has more than one illness. The questions are standardized which ensures that each person will be interviewed in the same way. Depending on the severity and type of symptoms, the SCID can take anywhere from 15 minutes to several hours to complete. The clinician's version can be purchased from American Psychiatric Publishing, Inc. (APPI).

## MDCalc Links to Online Screening/Assessment Tools.

*MDCalc* is an online resource that includes, among other items, links to screening/assessments instruments, some of which are designed to measure and drug and/or alcohol use. For each tool, data can be entered directly into the instrument online. Summary and/or total scores are generated with comments. Users should read the disclaimer about use of any calculations or interpretative information, which can be found at <http://www.mdcalc.com/disclaimer/>. Information on how to use the online instruments, next steps, how the instruments were validated, and the calculator's developer are available on each link's site. Please contact MDCalc if you have questions about the content or how you plan to use the instruments in your work. A "Contact MDCalc" link is found on the lower right of each Web page.

For the purposes of this tool guide, links are shown below for the Alcohol Use Disorders Identification Test—Consumption (AUDIT-C), CAGE questions for alcohol use, Clinical Institute Withdrawal Assessment of Alcohol Scale, Revised (CIWA-Ar), and the Clinical Opiate Withdrawal Scale (COWS).

### 1. AUDIT-C for Alcohol Use

<http://www.mdcalc.com/audit-c-for-alcohol-use/>

- ✓ The AUDIT-C is a three-item alcohol screen based on the 10-question AUDIT instrument. It was designed to help identify individuals who are hazardous drinkers or have active AUDs.

### 2. CAGE Questions for Alcohol Use

<http://www.mdcalc.com/cage-questions-for-alcohol-use/>

- ✓ This four-item instrument was designed to screen for alcohol use problems. It can be administered in less than a minute by clinicians. It is appropriate for use with individuals > 16 years of age.

### 3. CIWA-Ar for Alcohol Withdrawal

<http://www.mdcalc.com/ciwa-ar-for-alcohol-withdrawal/>

- ✓ The added value of this instrument is its ability to prevent the over or under-treating of patients in alcohol withdrawal with benzodiazepines. The treatment protocol is considered in conjunction with the CIWA-Ar score.

### 4. COWS for Opiate Withdrawal

<http://www.mdcalc.com/cows-score-for-opiate-withdrawal/>

- ✓ Besides being a useful tool during buprenorphine induction, it can also be used to assess acute opiate withdrawal during an opiate detoxification program, e.g.

## **Stages of Change Readiness and Treatment Eagerness Scale (SOCRATES), Version 8.**

The Stages of Change Readiness and Treatment Eagerness Scale (SOCRATES), Version 8, measures readiness to change, with items specifically focused on problem drinkers or drug users. Items can be used to provide feedback to patients/clients about their scores as a starting point for discussion. Re-administrations can be used to assess the impact of interventions on problem recognition, ambivalence, and progress in making changes (SAMHSA/CSAT, 1999). This is an experimental instrument that yields three factorially-derived scale scores: Recognition (Re), Ambivalence (Am), and Taking Steps (Ts). The instrument is in the public domain and may be used without special permission.

Answers should be recorded directly on the questionnaire form. Numbers circled by the respondent for each item are transferred to the SOCRATES Scoring Form for scoring. The sum of each column yields the three scale scores. Data entry screens and scoring routines are available.

Source Citation: Miller, W. R., & Tonigan, J. S. (1996). Assessing drinkers' motivation for change: The Stages of Change Readiness and Treatment Eagerness Scale (SOCRATES). *Psychology of Addictive Behaviors, 10*, 81-89.

## Personal Drinking Questionnaire (SOCRATES 8A)

**INSTRUCTIONS:** Please read the following statements carefully. Each one describes a way that you might (or might not) feel *about your drinking*. For each statement, circle one number from 1 to 5, to indicate how much you agree or disagree with it *right now*. Please circle one and only one number for every statement.

	NO! Strongly Disagree	No Disagree	? Undecided or Unsure	Yes Agree	YES! Strongly Agree
1. I really want to make changes in my drinking.	1	2	3	4	5
2. Sometimes I wonder if I am an	1	2	3	4	5
3. If I don't change my drinking soon, my problems are going to get worse.	1	2	3	4	5
4. I have already started making some changes in my drinking.	1	2	3	4	5
5. I was drinking too much at one time, but I've managed to change my drinking.	1	2	3	4	5
6. Sometimes I wonder if my drinking is hurting other people.	1	2	3	4	5
7. I am a problem drinker.	1	2	3	4	5
8. I'm not just thinking about changing my drinking, I'm already doing something about it.	1	2	3	4	5
9. I have already changed my drinking, and I am looking for ways to keep from slipping back to my old pattern.	1	2	3	4	5
10. I have serious problems with drinking.	1	2	3	4	5

e

	<b>NO!</b> Strongly Disagree	<b>No</b> Disagree	<b>?</b> Undecided or Unsure	<b>Yes</b> Agree	<b>YES!</b> Strongly Agree
<b>11. Sometimes I wonder if I am in control of my drinking.</b>	1	2	3	4	5
<b>12. My drinking is causing a lot of harm.</b>	1	2	3	4	5
<b>13. I am actively doing things now to cut down or stop drinking.</b>	1	2	3	4	5
<b>14. I want help to keep from going back to the drinking problems that I had before.</b>	1	2	3	4	5
<b>15. I know that I have a drinking problem.</b>	1	2	3	4	5
<b>16. There are times when I wonder if I drink too much.</b>	1	2	3	4	5
<b>17. I am an alcoholic.</b>	1	2	3	4	5
<b>18. I am working hard to change my</b>	1	2	3	4	5
<b>19. I have made some changes in my drinking, and I want some help to keep from going back to the way I used to drink.</b>	1	2	3	4	5

## Personal Drug Use Questionnaire (SOCRATES 8D)

**INSTRUCTIONS:** Please read the following statements carefully. Each one describes a way that you might (or might not) feel *about your drug use*. For each statement, circle one number from 1 to 5, to indicate how much you agree or disagree with it *right now*. Please circle one and only one number for every statement.

	NO! Strongly Disagree	No Disagree	? Undecided or Unsure	Yes Agree	YES! Strongly Agree
1. I really want to make changes in my use of drugs.	1	2	3	4	5
2. Sometimes I wonder if I am an addict.	1	2	3	4	5
3. If I don't change my drug use soon, my problems are going to get worse.	1	2	3	4	5
4. I have already started making some changes in my use of drugs.	1	2	3	4	5
5. I was using drugs too much at one time, but I've managed to change that.	1	2	3	4	5
6. Sometimes I wonder if my drug use is hurting other people.	1	2	3	4	5
7. I have a drug problem.	1	2	3	4	5
8. I'm not just thinking about changing my drug use, I'm already doing something about it.	1	2	3	4	5
9. I have already changed my drug use, and I am looking for ways to keep from slipping back to my old pattern.	1	2	3	4	5
10. I have serious problems with drugs.	1	2	3	4	5

e



	<b>NO!</b> Strongly Disagree	<b>No</b> Disagree	<b>?</b> Undecided or Unsure	<b>Yes</b> Agree	<b>YES!</b> Strongly Agree
<b>11. Sometimes I wonder if I am in control of my drug use.</b>	1	2	3	4	5
<b>12. My drug use is causing a lot of harm.</b>	1	2	3	4	5
<b>13. I am actively doing things now to cut down or stop my use of drugs.</b>	1	2	3	4	5
<b>14. I want help to keep from going back to the drug problems that I had before.</b>	1	2	3	4	5
<b>15. I know that I have a drug problem.</b>	1	2	3	4	5
<b>16. There are times when I wonder if I use drugs too much.</b>	1	2	3	4	5
<b>17. I am a drug addict.</b>	1	2	3	4	5
<b>18. I am working hard to change my drug</b>	1	2	3	4	5
<b>19. I have made some changes in my drug use, and I want some help to keep from going back to the way I used before.</b>	1	2	3	4	5

# SOCRATES Scoring Form - 19-Item Versions 8.0

Transfer the client's answers from questionnaire (see note below):

	Recognition	Ambivalence	Taking Steps
	1 _____	2 _____	
	3 _____		4 _____
			5 _____
		6 _____	
	7 _____		8 _____
			9 _____
	10 _____	11 _____	
	12 _____		13 _____
			14 _____
	15 _____	16 _____	
	17 _____		18 _____
			19 _____
<b>TOTALS</b>	Re _____	Am _____	Ts _____
<b>Possible Range:</b>	7-35	4-20	8-40

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## SOCRATES Profile Sheet (19-Item Version 8A)

**INSTRUCTIONS:** From the SOCRATES Scoring Form (19-Item Version) transfer the total scale scores into the empty boxes at the bottom of the Profile Sheet. Then for each scale, **CIRCLE** the same value above it to determine the decile range.

DECILE SCORES	Recognition	Ambivalence	Taking Steps
90 Very High		19-20	39-40
80		18	37-38
70 High	35	17	36
60	34	16	34-35
50 Medium	32-33	15	33
40	31	14	31-32
30 Low	29-30	12-13	30
20	27-28	9-11	26-29
10 Very Low	7-26	4-8	8 - 25
<b>RAW SCORES</b> (from Scoring Sheet)	Re=	Am=	Ts=

These interpretive ranges are based on a sample of 1,726 adult men and women presenting for treatment of alcohol problems through Project MATCH. Note that individual scores are therefore being ranked as low, medium, or high *relative to people already presenting for alcohol treatment*.

# Guidelines for Interpretation of SOCRATES-8 Scores

Using the SOCRATES Profile Sheet, circle the client's raw score within each of the three scale columns. This provides information as to whether the client's scores are low, average, or high *relative to people already seeking treatment for alcohol problems*. The following are provided as general guidelines for interpretation of scores, but it is wise in an individual case also to examine individual item responses for additional information.

## RECOGNITION

- ✓ **HIGH** scorers directly acknowledge that they are having problems related to their drinking, tending to express a desire for change and to perceive that harm will continue if they do not change.
- ✓ **LOW** scorers deny that alcohol is causing them serious problems, reject diagnostic labels such as “problem drinker” and “alcoholic,” and do not express a desire for change.

## AMBIVALENCE

- ✓ **HIGH** scorers say that they sometimes *wonder* if they are in control of their drinking, are drinking too much, are hurting other people, and/or are alcoholic. Thus a high score reflects ambivalence or uncertainty. A high score here reflects some openness to reflection, as might be particularly expected in the contemplation stage of change.
- ✓ **LOW** scorers say that they *do not wonder* whether they drink too much, are in control, are hurting others, or are alcoholic. Note that a person may score low on ambivalence *either* because they “know” their drinking is causing problems (high Recognition), *or* because they “know” that they do not have drinking problems (low Recognition). Thus a low Ambivalence score should be interpreted in relation to the Recognition score.

## TAKING STEPS

- ✓ **HIGH** scorers report that they are already doing things to make a positive change in their drinking, and may have experienced some success in this regard. Change is underway, and they may want help to persist or to prevent backsliding. A high score on this scale has been found to be predictive of successful change.
- ✓ **LOW** scorers report that they are not currently doing things to change their drinking, and have not made such changes recently.

## AC-OK Screen for Co-Occurring Disorders.

The AC-OK Screen for Co-Occurring Disorders is a rapid-response screen to identify the co-existing disorders of substance use, mental health and trauma related mental health issues of adolescents.

### AC-OK-COD Adolescent Screen

Gender: \_\_\_\_\_ Age: \_\_\_\_\_ Last grade completed \_\_\_\_\_

***Read as: "During the past year have you":***

- |     |   |     |    |
|-----|---|-----|----|
| 1.  | Felt really sad, lonely, hopeless; stopped enjoying things, wanted to eat more or less, had problems sleeping, or doing what you need to at home or at school?                          | Yes | No |
| 2.  | Heard voices or seen things that others don't hear or see?  | Yes | No |
| 3.  | Drink alcohol or used other drugs more than you meant to?   | Yes | No |
| 4.  | Burned or cut yourself?   | Yes | No |
| 5.  | Have you experienced a very bad thing happen (a traumatic event) where you continue to feel scared, worried, or nervous or even had nightmares that bothered you after it was all over? | Yes | No |
| 6.  | Tried to stop drinking alcohol or using other drugs, but couldn't?  | Yes | No |
| 7.  | Been prescribed medication for your feelings?   | Yes | No |
| 8.  | Got in trouble with the law, school, or parents, or lost friends because of your drinking alcohol or using other drugs, and continued to use?   | Yes | No |
| 9.  | Drink alcohol or used other drugs to change the way you feel?   | Yes | No |
| 10. | Had thoughts about hurting yourself or wanting to die?  | Yes | No |
| 11. | Tried to kill yourself?   | Yes | No |
| 12. | Have you ever been afraid of your parent, caretaker or a family member?   | Yes | No |
| 13. | Have you ever been hit, slapped, kicked, touched in a bad way, cursed at, yelled at or threatened by someone?   | Yes | No |
| 14. | Changed your friends or planned your free time to include drinking alcohol or using other drugs?  | Yes | No |
| 15. | Needed to drink more alcohol or use more drugs to get the same buzz or high as when you first started using?  | Yes | No |

## Instructions: OK Adolescent Screen

“I’m glad you called (or came in); let’s see how I can help. In your own words, what is going on, OR can you tell me a little about why you called (or came in) today?”

“In order to find the best services for you, I’d like to ask you a few short yes or no questions to see if there is anything we may have missed. There are no right or wrong answers and these questions may or may not apply to your situation. Is this okay with you?”

Scoring: Remember, one (1) “Yes” answer on any of the three (3) domains (Substance Abuse, Mental Health, and Trauma) indicates that an additional assessment(s) is needed in that domain.

Substance Abuse: 3  , 6  , 8  , 9  , 14  , 15

Mental Health: 1  , 2  , 4  , 7  , 10  , 11  ,

Trauma 5  , 12  , 13

### Reading Level of Screen:

Flesch Reading ease: .76

Flesch—Kincaid Grade Level: 6

*The AC-OK-COD Adolescent Screen is copyrighted scale. Commercial use of the AC-OK-COD Adolescent Screen is prohibited. The screen is available without charge to researchers, clinicians and agencies serving people with a co-occurring disorder with the compliments of the author. Contact me at [alcherry@OU.edu](mailto:alcherry@OU.edu) to receive a copy. A PDF version is also available at <http://faculty-staff.ou.edu/C/Andrew.L.Cherry-1,Jr/OK-COD%20Adole%20Screen%2010-20-8.pdf>.*

## Trauma Screening Questionnaire (TSQ).

The TSQ is a 10-item symptom screen designed for use with survivors of all types of traumatic stress. It is based on items from the PTSD Symptom Scale - Self Report (PSS-SR; Foa et al., 1993) and has five arousal items and five re-experiencing items. Respondents are asked to endorse those items that they have experienced at least twice in the past week. A positive screen occurs when there is an endorsement of at least six items. The authors recommend that screening be conducted three to four weeks following the trauma to allow for normal recovery processes to take place. This questionnaire is not in the public domain (VA, 2016).

## PTSD Checklist (PCL).

The PTSD Checklist (PCL) is used to explore whether an individual may meet criteria for **post-traumatic stress disorder**. Sometimes people think they are experiencing PTSD, but in reality they are not. In other cases, people deny having PTSD, but have a lot of symptoms that define the disorder. A problem with PTSD is that it doesn't go away by itself. People can avoid the PTSD-triggers, but the pain is still there. And when people get to the point they can't avoid the triggers, they may experience a lot of pain. It only takes about three minutes to complete the PCL. There is a military version as well as a civilian version of the PCL. The military version is more specific to PTSD caused by military experiences and the civilian version applies generally to any traumatic event (Barends Psychology Practice, n.d.).

### Scoring the PCL

- Add up all items from each of the 17 items for a total severity score (range = 17-85).
- A score of 17-29 shows little to no severity.
- A score of 28-29 is indicative of some PTSD symptoms.
- Scores of 30–44 are Moderate to Moderately High in severity of PTSD symptoms.
- Scores of 45-85 reflect High Severity of PTSD symptoms (Choices Counseling, n.d.).

The checklist is in the public domain so it is permissible for personal or group use (Choices Counseling, n.d.).



## PTSD Checklist (PCL)

If an event listed on the Life Events Checklist happened to you or you witnessed it, please complete the items below. If more than one event happened, please choose the one that is most troublesome to you now.

The event you experienced was \_\_\_\_\_ on \_\_\_\_\_.  
(EVENT) (DATE)

Instructions: Below is a list of problems and complaints that people sometimes have in response to stressful life experiences. Please read each one carefully, then circle one of the numbers to the right to indicate how much you have been bothered by the problem in the past month.

BOTHERED BY	NOT AT ALL	A LITTLE BIT	MODERATELY	QUITE A BIT	EXTREMELY
1. Repeated disturbing memories, thoughts, or images of the stressful experience?	1	2	3	4	5
2. Repeated, disturbing dreams of the stressful experience?	1	2	3	4	5
3. Suddenly acting or feeling as if the stressful experience were happening again (as if you were reliving it)?	1	2	3	4	5
4. Feeling very upset when something reminded you of the stressful experience?	1	2	3	4	5
5. Having physical reactions (e.g., heart pounding, trouble breathing, or sweating) when something reminded you of the stressful experience?	1	2	3	4	5
6. Avoiding thinking about or talking about the stressful experience or avoiding having feelings related to it?	1	2	3	4	5
7. Avoiding activities or situations because they remind you of the stressful experience?	1	2	3	4	5
8. Trouble remembering important parts of the stressful experience?	1	2	3	4	5
9. Loss of interest in activities that you used to enjoy?	1	2	3	4	5
10. Feeling distant or cut off from other people?	1	2	3	4	5
11. Feeling emotionally numb or being unable to have loving feelings for those close to you?	1	2	3	4	5
12. Feeling as if your future will somehow be cut short?	1	2	3	4	5
13. Trouble falling or staying asleep?	1	2	3	4	5
14. Feeling irritable or having angry outbursts?	1	2	3	4	5
15. Having difficulty concentrating?	1	2	3	4	5
16. Being "super alert" or watchful or on guard?	1	2	3	4	5
17. Feeling jumpy or easily startled?	1	2	3	4	5

## Columbia-Suicide Severity Rating Scale (C-SSRS).

The Columbia-Suicide Severity Rating Scale (C-SSRS), Screener version, contains from three to six questions for use by individuals where frequent monitoring of suicidal ideation/behaviors is required. This version includes all information necessary to make a decision about next steps (the 1 to 5 questions about severity of suicidal ideation (thoughts of suicide) and one question on the full range of suicidal behaviors. The C-SSRS Screen version is most often used with the **Recent** timeframe of one month for ideation and three months for behavior or as a **Since Last Visit** measurement.

C-SSRS SCREENER WITH TRIAGE POINTS*		
I. SUICIDE IDEATION DEFINITIONS AND PROMPTS:	Past Month	
Ask questions that are in bolded and underlined	Yes	NO
<b>Ask Questions 1 and 2</b>		
<b>1) Wish to be Dead:</b> Person endorses thoughts about a wish to be dead or not alive anymore, or wish to fall asleep and not wake up?  <u><i>Have you wished you were dead or wished you could go to sleep and not wake up?</i></u>		
<b>2) Suicidal Thoughts:</b> General non-specific thoughts of wanting to end one's life/commit suicide, " <i>I've thought about killing myself</i> " without general thoughts of ways to kill oneself/associated methods, intent, or plan."  <u><i>Have you actually had any thoughts of killing yourself?</i></u>		
<b>If YES to 2, ask questions 3, 4, 5, and 6. If NO to 2, go directly to question 6</b>		
<b>3) Suicidal Thoughts with Method (without Specific Plan or Intent to Act):</b> Person endorses thoughts of suicide and has thought of a least one method during the assessment period. This is different than a specific plan with time, place or method details worked out. " <i>I thought about taking an overdose but I never made a specific plan as to when where or how I would actually do it....and I would never go through with it.</i> "  <u><i>Have you been thinking about how you might do this?</i></u>		
<b>4) Suicidal Intent (without Specific Plan):</b> Active suicidal thoughts of killing oneself and patient reports having <u>some intent to act on such thoughts</u> , as oppose to " <i>I have the thoughts but I definitely will not do anything about them.</i> "  <u><i>Have you had these thoughts and had some intention of acting on them?</i></u>		
<b>5) Suicide Intent with Specific Plan:</b> Thoughts of killing oneself with details of plan fully or partially worked out and person has some intent to carry it out.  <u><i>Have you started to work out or worked out the details of how to kill yourself? Do you intend to carry out this plan?</i></u>		

<b>C-SSRS SCREENER WITH TRIAGE POINTS*</b>		
<b>I. SUICIDE IDEATION DEFINITIONS AND PROMPTS:</b>	<b>Past Month</b>	
Ask questions that are in bolded and underlined	Yes	NO
<p><b>6) Suicide Behavior Question:</b>  <u><b>Have you ever done anything, started to do anything, or prepared to do anything to end your life?</b></u>                      Examples: Collected pills, obtained a gun, gave away valuables, wrote a will or suicide note, took out pills but didn't swallow any, held a gun but changed your mind or it was grabbed from your hand, went to the roof but didn't jump; or actually took pills, tried to shoot yourself, cut yourself, tried to hang yourself, etc.</p> <p><b>If YES, ask: <u>How long ago did you do any of these?</u></b>  <input type="checkbox"/> Over a year ago?   <input type="checkbox"/> Between three months and a year ago?   <input type="checkbox"/> Within the last three months?</p>		

**II. Triage Protocol for C-SSRS Screening**  
 (Items 1 to-5 linked to last item answered YES)

- Item 1 – Mental Health Referral at discharge
- Item 2 – Mental Health Referral at discharge
- Item 3 – Care Team Consult (Psychiatric Nurse) and Possible Patient Safety Monitor/ Procedures
- Item 4 – Psychiatric Consultation and Patient Safety Monitor/ Procedures
- Item 5 – Psychiatric Consultation and Patient Safety Monitor/ Procedures

- Item 6 – If over a year ago, Mental Health Referral at discharge
  - If between 1 week and 1 year ago- Care Team Consult (Psychiatric Nurse) and Patient Safety Monitor
  - If one week ago or less- Psychiatric Consultation and Patient Safety Monitor

- Disposition:
- Mental Health Referral at discharge
  - Care Team Consult (Psychiatric Nurse) and Possible Patient Safety Monitor/Procedures
  - Psychiatric Consultation and Patient Safety Monitor/ Procedures

**III. Training**

The Columbia University Medical Center, Center for Suicide Risk Assessment, C-SSRS Web site contains links to a variety of trainings in different languages. There is no cost associated with training. Training videos can be downloaded for use by individuals and/or groups. The full C-SSRS video is 45 minutes and the training video for the screener version is 18 minutes in duration (CUMC/CSRA/C-CCRS, n.d.).

\*Used with permission.

## Addiction Severity Index (ASI) – 5<sup>th</sup> edition\*.

The Addiction Severity Index (ASI) was developed in 1980 by A. Thomas McLellan, Ph.D., and colleagues at the University of Pennsylvania's Center for the Studies of Addiction.. (McLellan also founded and served as chairman of the board of the Treatment Research Institute.) Over the years, the ASI has become one of the most widely utilized addiction assessment instruments in the field (Mäkelä, 2004; Wikipedia, n.d.). It allows clinicians to identify and address client needs, along with potential challenges or barriers, to their goals of significantly reducing or abstaining from drug use.(Cohen, Collins, Jr., Young, McChargue, Leffingwell, & Cook, 2009). The tool has been translated into a number of languages, with a European version developed in the early 1990s (Mäkelä, 2004). It is in the public domain (NIAAA, n.d.).

ASI administration takes 45-60 minutes for a trained interviewer. Another 10-20 minutes is required for scoring (Mäkelä, 2004). The tool explicitly reminds both clinicians and clients that the ASI is an interview and not a test. As a semistructured interview, the ASI screens for impairments and problems that commonly accompany substance use and dependence. Included are interpersonal difficulties with friends, family, and co-workers; medical conditions such as , sexually transmitted diseases, hepatitis B and C, HIV/AIDS, alcoholic liver disease, pneumonia, acute myocardial infarction, and metabolic and endocrine complications; and legal troubles. It covers seven potential problem areas: medical status, employment and support, drug use, alcohol use, legal status, family/social status, and psychiatric status. These areas of focus allow the interview to gather a comprehensive picture of how substance use may be affecting the different areas. Hence, the ASI focuses on the big picture of addiction, taking into consideration that substance use is often rooted in several different areas, like biology, environment, or psychology (Samet, Waxman, Hatzenbuehler, & Hasin, 2007).

\*There is a 6<sup>th</sup> edition. However, the writer was unable to locate this version for inclusion in this document.

## Addiction Severity Index - 5th Edition

Clinical/Training Version

**A. Thomas McLellan, Ph.D.**  
**Deni Carise, Ph.D.**  
**Thomas H. Coyne, MSW**  
**T. Ron Jackson, MSW**

*Remember: This is an interview, not a test*

*Item numbers circled are to be asked at follow-up.  
 Items with an asterisk \* are cumulative and should be rephrased at*

**INTRODUCING THE ASI:** Introduce and explain the seven potential problem areas: Medical, Employment/Support Status, Alcohol, Drug, Legal, Family/Social, and Psychiatric. All clients receive this same standard interview. All information gathered is confidential; explain what that means in your facility; who has access to the information and the process for the release of information.

There are two time periods we will discuss:

1. The past 30 days
2. Lifetime

**Patient Rating Scale:** Patient input is important. For each area, I will ask you to use this scale to let me know how bothered you have been by any problems in each section. I will also ask you how important treatment is for you for the area being discussed.

The scale is:

- 0 - Not at all
- 1 - Slightly
- 2 - Moderately
- 3 - Considerably
- 4 - Extremely

Inform the client that he/she has the right to refuse to answer any question. If the client is uncomfortable or feels it is too personal or painful to give an answer, instruct the client not to answer. Explain the benefits and advantages of answering as many questions as possible in terms of developing a comprehensive and effective treatment plan to help them.

*Please try not give inaccurate information!*

### INTERVIEWER INSTRUCTIONS:

1. Leave no blanks.
2. Make plenty of Comments (if another person reads this ASI, they should have a relatively complete picture of the client's perceptions of his/her problems).
3. -9 = Question not answered.  
 -8 = Question not applicable.
4. Terminate interview if client misrepresents two or more sections.
5. When noting comments, please write the question number.

**HALF TIME RULE:** If a question asks the number of months, round up periods of 14 days or more to 1 month. Round up 6 months or more to 1 year.

**CONFIDENCE RATINGS:** ⇒ Last two items in each section.  
 ⇒ Do not over-interpret.  
 ⇒ Denial does not warrant misrepresentation.  
 ⇒ Misrepresentation = overt contradiction in information.

*Probe, cross-check and make plenty of comments!*

### HOLLINGSHEAD CATEGORIES:

1. Higher execs, major professionals, owners of large businesses.
2. Business managers of medium sized businesses, lesser professions, i.e., nurses, opticians, pharmacists, social workers, teachers.
3. Administrative personnel, managers, minor professionals, owners/proprietors of small businesses, i.e., bakery, car dealership, engraving business, plumbing business, florist, decorator, actor, reporter, travel agent.
4. Clerical and sales, technicians, small businesses (bank teller, bookkeeper, clerk, draftsman, timekeeper, secretary).
5. Skilled manual - usually having had training (baker, barber, brakeperson, chef, electrician, fireman, machinist, mechanic, paperhanger, painter, repairperson, tailor, welder, police, plumber).
6. Semi-skilled (hospital aide, painter, bartender, bus driver, cutter, cook, drill press, garage guard, checker, waiter, spot welder, machine operator).
7. Unskilled (attendant, janitor, construction helper, unspecified labor, porter, including unemployed).

### LIST OF COMMONLY USED DRUGS:

Alcohol:	Beer, wine, liquor
Methadone:	Dolophine, LAAM
Opiates:	Pain killers = Morphine, Dilaudid, Demerol, Percocet, Darvon, Talwin, Codeine, Tylenol 2,3,4, Robitussin, Fentanyl
Barbiturates:	Nembutal, Seconal, Tuinol, Amytal, Pentobarbital, Secobarbital, Phenobarbital, Fiorinol
Sed/Hyp/Tranq:	Benzodiazepines = Valium, Librium, Ativan, Serax Tranxene, Xanax, Miltown, Other = ChloralHydrate (Noctex), Quaaludes Dalmane, Halcion
Cocaine:	Cocaine Crystal, Free-Base Cocaine or "Crack," and "Rock Cocaine"
Amphetamines:	Monster, Crank, Benzedrine, Dexedrine, Ritalin, Preludin, Methamphetamine, Speed, Ice, Crystal
Cannabis:	Marijuana, Hashish
Hallucinogens:	LSD (Acid), Mescaline, Mushrooms (Psilocybin), Peyote, Green, PCP (Phencyclidine), Angel Dust, Ecstasy
Inhalants:	Nitrous Oxide, Amyl Nitrate (Whippits, Poppers), Glue, Solvents, Gasoline, Toluene, Etc.

Just note if these are used:

Antidepressants,
Ulcer Meds = Zantac, Tagamet
Asthma Meds = Ventoline Inhaler, Theodur
Other Meds = Antipsychotics, Lithium

### ALCOHOL/DRUG USE INSTRUCTIONS:

The following questions refer to two time periods: the past 30 days and lifetime. Lifetime refers to the time prior to the last 30 days.

- ⇒ 30 day questions only require the number of days used.
- ⇒ Lifetime use is asked to determine extended periods of use.
- ⇒ Regular use = 3+ times per week, binges, or problematic irregular use in which normal activities are compromised.
- ⇒ Alcohol to intoxication does not necessarily mean "drunk", use the words "to feel or felt the effects", "got a buzz", "high", etc. instead of intoxication. As a rule of thumb, 3+ drinks in one sitting, or 5+ drinks in one day defines "intoxication".
- ⇒ How to ask these questions:
  - "How many days in the past 30 have you used....?"
  - "How many years in your life have you regularly used....?"

































Problems	SEVERITY PROFILE									
	0	1	2	3	4	5	6	7	8	9
<b>MEDICAL</b>										
<b>EMPL/SUP</b>										
<b>ALCOHOL</b>										
<b>DRUG</b>										
<b>LEGAL</b>										
<b>FAM/SOC</b>										
<b>PSYCH</b>										

## Opioid Risk Tool (ORT).

Some experts say that risks for opioid abuse should be considered before any prescription for opioids is written. The Opioid Risk Tool (ORT) is one tool designed to help clinicians take into account a patient’s risk of opioid abuse. ORT can also be downloaded from <https://www.drugabuse.gov/sites/default/files/files/OpioidRiskTool.pdf>.

# OPIOID RISK TOOL

Mark each box that applies	Female	Male
<b>Family history of substance abuse</b>		
Alcohol	1	3
Illegal drugs	2	3
Rx drugs	4	4
<b>Personal history of substance abuse</b>		
Alcohol	3	3
Illegal drugs	4	4
Rx drugs	5	5
<b>Age between 16—45 years</b>	1	1
<b>History of preadolescent sexual abuse</b>	3	0
<b>Psychological disease</b>		
ADD, OCD, bipolar, schizophrenia	2	2
Depression	1	1
<b>Scoring totals</b>		

**Total Score Risk Category**

- Low Risk            0 – 3
- Moderate Risk    4 – 7
- High Risk           > 8

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## Drinking Agreement: Handout.

# Drinking Agreement

Date:

I,

agree to

the following drinking limit:

• Number of drinks per week:

• Number of drinks per occasion:

Signature:



*It is never a good idea to drink and drive OR to drink during pregnancy.*

Adapted from American Public Health Association SBI Manual, 2008.



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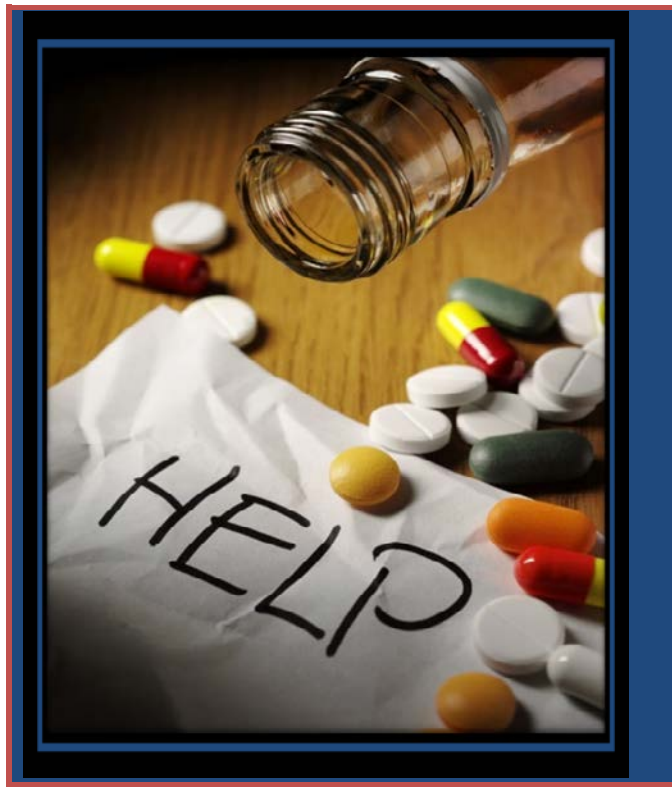
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Department of  
**Mental Health &  
Substance Abuse Services**



8/15/2016

**Substance Use Best Practice Tool  
Guide**

**APPENDICES**

Division of Clinical Leadership in Collaboration with the  
Division of Substance Abuse Services



Department of  
**Mental Health &  
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8/15/2016

## **Substance Use Best Practice Tool Guide**

### **APPENDIX A: Caffeine Use**

Division of Clinical Leadership in Collaboration with the  
Division of Substance Abuse Services



## Issues around Caffeine Use

Hands down, caffeine is the most widely used drug in the world (Meredith, Juliano, Hughes, & Griffiths, 2013; Striley, Griffiths, & Cottler, 2011). It is a stimulant found in many foods and drinks as well as cold medicines and pain relievers, but most people do not think of caffeine as a drug (AMH/AHS, 2013; Encyclopedia of Mental Disorders, n.d.). Caffeine is a bitter, white crystalline alkaloid derived from tea or coffee that belongs to a class of compounds called xanthines. It is classified together with amphetamines and cocaine as an analeptic or central nervous system (CNS) stimulant (Encyclopedia of Mental Disorders (n.d.). Estimates show that caffeine is consumed regularly by 80 to 90 percent of youth and adults in the United States (Striley et al., 2011).

There is little to no data on caffeine's potential adverse effects on children and adolescents. Most research on the substance has been conducted with adults and demonstrates amounts as small as two to three cups of coffee can trigger withdrawal effect marked by tiredness or sleepiness (Branum, Rossen, & Schoendorf, 2014). Caffeine use disorder is only included in Section III of the Diagnostic and Statistical Manual (DSM)-5 and found under the heading "Conditions for Further Study". This category is reserved for conditions that seem to have some evidence of effects on psychological well-being, but lack a sufficient research base to warrant their inclusion in the list of classifiable disorders. It should be noted that caffeine withdrawal and caffeine intoxication are listed in the DSM-5 as disorders (American Psychiatric Association, 2013; Theravive, 2015).

The United States Food and Drug Administration (FDA) considers caffeine to be a safe substance (Branum et al., 2014). An amount of 400 mg of caffeine, about four to five cups of coffee, is indicated as a safe stimulant amount for a healthy adult (Hoeger & Hoeger, 2015). Caffeine can be found naturally in more than 60 plants, like coffee beans, cacao, and tea leaves. However, there is a powdered form of caffeine that is manmade and added to energy drinks and/or sold in its powdered form or as capsule supplements. As much as 100,000 mg of caffeine powder can be purchased online for about \$10.00. That amount is more than 1,000 Red Bulls' worth of caffeine in one package (Newman, 2014).

Customer reviews at the online sites are quick to point out how easy it is to mistakenly use too much of the caffeine powder. A serving size is 1/16 of a teaspoon. Mixing two regular teaspoons of the powder into a drink is equivalent to drinking 70 Red Bulls at once, which could be deadly. The pre-measured capsules of caffeine powder each contain 200 mg of caffeine. Experts say that the public is unaware regarding the caffeine content present in energy drinks, powder, and capsules, and in the risk associated with ingestion of even small quantities (Newman, 2014).

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**Manufacturers are not required to label caffeine amounts and products like energy drinks do not have regulated caffeine limits (American University, 2014).**

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Manufacturers are not required to label caffeine amounts and products like energy drinks do not have regulated caffeine limits (American University, 2014; Encyclopedia of Mental Disorders, n.d.). The FDA regulates dietary supplements but does so differently from the way it regulates conventional food and drug products (Newman, 2014). Neither does the Institute of Medicine (IOM) nor the Dietary Guidelines for Americans provide guidance for caffeine as a nutrient (Branum et al., 2014). The Nutrition Facts Panel on food labels is required to include recommended dietary information for nutrients and caffeine is not a nutrient. Caffeine is considered "safe" when

### *Caffeine Use*

used in cola-type drinks up to a level of 0.02 percent or 200 parts per million (FDA, 2016). Hence, manmade caffeine, including caffeine powder, does not need approval from the FDA before it can be marketed to the general public (Newman, 2014). However, reports of excessive caffeine consumption should be noted since results frequently show negative outcomes such as increased blood sugar concentrations, hyperactivity, hypertension, and arrhythmia, e.g. (Branum et al, 2014).

When caffeine reaches the brain, it increases secretion of norepinephrine, the neurotransmitter associated with the flight or fight stress response. These elevated norepinephrine levels and increased activity of neurons help to explain why symptoms of caffeine intoxication often resemble a panic attack. The Board of the American Medical Association acknowledged that energy drinks contained excessive and massive amounts of caffeine that might lead to an array of health issues in young people and has supported banning their marketing to youth younger than 18 years of age (FoxNews, 2013). It is reported that energy drinks contain anywhere from 50 mg to 505 mg of caffeine (Meredith et al., 2013; SAMHSA/CBHSQ, 2013), compared to 50 mg in a 12-ounce cola or around 100 mg in a 5-ounce cup of coffee (SAMHSA/CBHSQ, 2013). The American Academy of Pediatrics (AAP) took a similar position, contending that the stimulants in energy drinks have no place in the diets of youth (Branum et al., 2014).

A National Health and Nutrition Examination Survey (NHANES) involving a nationally representative sample was administered to examine trends in caffeine intake as well as energy drinks and other beverages among children, adolescents, and young adults in the United States. The study analyzed survey data from 1999-2000 to 2009-2010. Survey participants included persons as young as two years of age through 22 years. Results indicated that approximately 73 percent of young people consumed caffeine on a given day. Moreover, there were significant differences by age, race/ethnicity, and poverty-income ratio (PIR). Youth from higher income families were more

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**Tea overtook soda as the largest contributor of caffeine intake for two-to-five year olds in 2009-2010 from 1999-2000 (Branum et al., 2014).**

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likely to consume caffeine than youth from lower income families. White, non-Hispanic youth were more likely to consume caffeine than non-Hispanic, African American/Black or Mexican American youth. Soda was still the major contributor of caffeine intake, though its contribution

declined from 62 percent in 1999-2000 to 38 percent in 2009-2010. Tea maintained its standing as the second largest caffeine-intake contributor overall. However, tea overtook soda as the largest contributor of caffeine intake among two to five year olds by 2009-2010. Coffee increased as a caffeine-intake contributor, from 10 percent in 1999-2000 to 24 percent in 2009-2010. Energy drinks made up eight percent of the caffeine intake in young people in 2009-2010, a contribution category that did not exist in 1999-2000 (Branum et al., 2014).

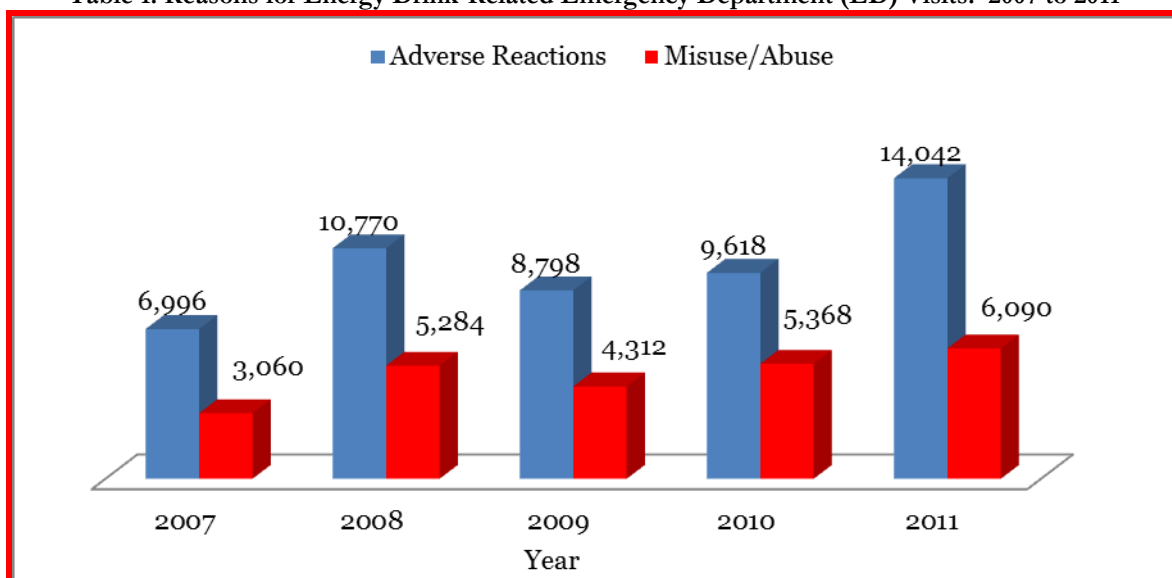
Energy drinks have become very popular among the younger crowd, especially 12 to 17 year olds and persons ages 18 to 24 (CDC, 2014). Energy shots, more concentrated forms of energy drinks like 5-Hour Energy, have become increasingly popular among diverse age groups, including older adults (SAMHSA/CBHSQ, 2013). Equally popular is the trend for these users to mix energy drinks with alcoholic beverages. Research has shown individuals that mix their alcohol and energy drinks were three times more likely to be binge drinkers (CDC, 2014). One study, for example, found that bar patrons who consumed alcohol mixed with energy drinks were three times more likely to leave the bar highly intoxicated and four times more likely to intend to drive under the influence than patrons who did not consume their alcohol with the energy drink mixture (SAMHSA/CBHSQ, 2013). They are further two times as likely to report taking advantage of someone else sexually,

### Caffeine Use

being taken advantage of sexually, and riding with a driver who was under the influence of alcohol (CDC, 2014).

Between 2007 and 2011, visits to emergency departments (EDs) increased by 106 percent. In 2007, there were 10,068 energy drink-related ED visits and 20,783 visits in 2011. Most of the visits involved either adverse reactions or misuse/abuse of drugs. (See Table 1 below.) ED visits involving energy drinks only and no other drug involvement tended to be classified as adverse reactions. In contrast, the misuse/abuse classification tended to capture visits involving energy drinks in combination with other drugs. In 2007, 99.9 percent of the energy drink-related ED visits were classified as either adverse reactions or misuse/abuse. In 2011, 96.9 percent of the visits were captured by those two categories. Each year from 2007 to 2011, most visits were classified as adverse reactions, ranging from 64 percent in 2010 to approximately 70 percent in 2007 and 2011 (SAMHSA/CBHSQ, 2013).

**Table 1. Reasons for Energy Drink-Related Emergency Department (ED) Visits: 2007 to 2011**



Source: SAMHSA/CBHSQ, 2013.

There have also been concerns around caffeinated alcoholic beverages (CABs). These are premixed beverages that combine caffeine, alcohol, and other stimulants. They may be malt- or distilled-spirits based and more often than not have higher alcohol content than beer. For example, the alcoholic content in beer is 4-5 percent, compared to 5-12 percent on average for CABs. Caffeine content for these beverages is typically not reported (CDC, 2014). On November 13, 2009, the FDA sent warning letters to almost 30 manufacturers of CABs indicating its intention to investigate the legality and safety of their products (FDA, 2013). On November 17, 2010, both the Federal Trade Commission (FTC) and FDA sent warning letters to four companies that marketed CBAs, citing unusual risks to health and safety and warning that marketing of such drinks may constitute deceptive or unfair practice in violation of the FTC Act (FTC, 2010). The CDC has created a fact sheet about caffeine and alcohol that can be accessed from <http://www.cdc.gov/alcohol/fact-sheets/caffeine-and-alcohol.htm>. There are reports of CABs being virtually nonexistent in the U.S. at this time, but the craze of mixing alcohol and caffeine and/or energy drinks still seems to be active, especially among young people and college students in particular (Hoeger & Hoeger, 2015).

## Additional Warnings

The United States Food and Drug Administration (FDA) has issued a warning about powdered pure caffeine. The product is being marketed directly to individuals. In particular, the agency is concerned about powdered pure caffeine that is sold in bulk bags over the Internet. These products are 100 percent caffeine, with a single teaspoon equivalent to the amount of caffeine in 25 cups of coffee. Pure caffeine is very powerful and even small amounts can cause accidental overdose. Parents should be aware that these products may be especially attractive to youth (RxList.com, 2014).

Symptoms of caffeine overdose can include seizures, rapid or dangerously erratic heartbeat, and death. Vomiting, stupor, disorientation, and diarrhea are also symptoms of caffeine toxicity. It is believed that the symptoms are much more severe than those resulting from drinking too much tea, coffee, or other caffeinated beverages. In particular, individuals with pre-existing heart conditions should avoid pure caffeine products (RxList.com, 2014).

Every effort should be made by individuals to avoid powdered pure caffeine. This product is 100 percent caffeine, with a teaspoon roughly equivalent to the amount in 25 cups of coffee (Landa, 2014). It is almost impossible to accurately measure the products with common kitchen measuring tools, thus making consumption of a lethal amount highly probable. In the event the products are used and there appears to be an adverse event, stop using the products immediately and seek immediate medical advice or care. The FDA wants to collect information on adverse events associated with powdered pure caffeine and/or other highly caffeinated products. Reports can be made to the FDA by contacting them at 240-402-2405 or via email at [CAERS@cfsan.fda.gov](mailto:CAERS@cfsan.fda.gov).

In addition, the FDA has announced it will begin investigating the trend of adding caffeine to a growing number of products, particularly food products that are marketed to children and adolescents (Taylor, 2013). As recent as December 2015, the FDA sent a letter to the makers of Steem Peanut Butter, a caffeinated peanut spread that contains 150 mg of caffeine per serving. The letter is a request for more information about the manufacturer's use of caffeine in peanut butter. It has been reported that a single serving of this peanut butter contains five times the caffeine of a can of Coca-Cola Classic (FoxNews.com, 2015).

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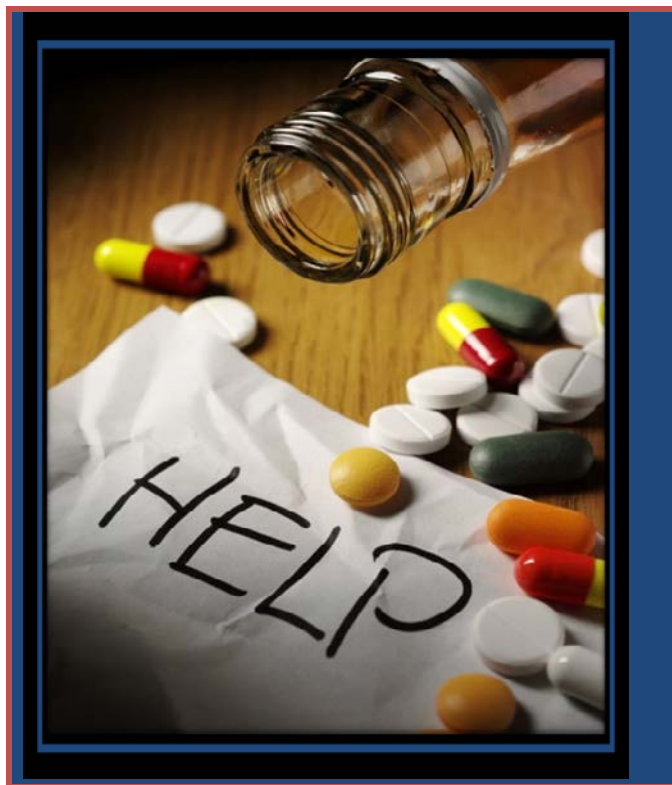
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**APPENDIX B: e-Cigarettes**

Division of Clinical Leadership in Collaboration with the  
Division of Substance Abuse Services

## E-Cigarettes

Electronic cigarettes, or e-cigs as they are sometimes referenced, are battery-powered devices that vaporize a flavored propylene glycerin or glycol solution, with or without nicotine, to simulate smoking a cigarette (Pepper, Emery, Ribisl, & Brewer, 2014; Rahman, Hann, Wilson, & Worrall-Carter, 2015; Tremblay et al., 2015). Some e-cigs contain a vegetable glycerin solution and some manufacturers have started to mix the two solutions in an attempt to give users what they believe is the best of both worlds (QuitSmokingCommunity.org, n.d.). E-cigs are readily available on the Internet and in local convenience stores, and have become a popular alternative to traditional (i.e., combustible/conventional) cigarettes (Williams, To, Bozhilov, & Talbot, 2015). These products are also fast emerging as a public health challenge (Tremblay et al., 2015).

E-cigarettes are part of the growing landscape of electronic nicotine delivery systems (ENDS). Introduced to markets in the United States in 2007, ENDS also includes e-hookahs, e-cigars, hookah pens, and vape pens (CDC, 2015; Gourdet, Chriqui, & Chaloupka, 2014; Tremblay et al., 2015). E-cigarette users refer to their use of the product as vaping (EHP, 2014). When e-cigarettes came on the scene, they were largely promoted as a smoking cessation tool. However, results around this potential benefit have not been as promising as desired. The quit rate for smokers that used e-cigarettes for smoking cessation was seven percent, compared to about six percent for individuals that used existing smoking cessation aids. Better results were evident for clients treated with placebo e-cigarettes (i.e., e-cigarettes without nicotine). Nearly 60 percent of those clients successfully quit smoking compared to those given e-cigarettes containing nicotine (Maa, 2015).

The nicotine solution in e-cigs can be flavorless, but manufacturers tend to add flavors. Flavors range from the sophisticated mint chocolate truffle and whiskey, e.g., to the baldly juvenile, like cotton candy, gummy bears, and bubble gum. Seven of 10 middle and high school students that currently use e-cigs have used a flavored product (King, 2015). In general, flavorings are safe, but the safety of e-cig flavorings has not yet been established. At least one flavoring, diacetyl, has been linked to bronchiolitis obliterans (Samet, 2015). Nevertheless, it is extremely difficult to quantify exposure. Each manufacturer of e-cigs has a different design for the device and e-liquid. As a result, the vapor amount varies (EHP, 2014). There are at least 450 different brands of e-cigs that can be categorized according to the following three types: 1) minis or cigalikes; 2) mid-sized; and 3) tanks or mods (King, 2015).

Not unexpected, persons that perceive e-cigs as less addictive or harmful than traditional (i.e., combustible) cigarettes demonstrated the highest prevalence of use (Chapman & Wu, 2014). Other characteristics of users of e-cigarettes include the following:

- Former and current smokers are more likely to use e-cigs than persons who were never smokers (Perry et al., 2014; Rahman et al., 2014).
- E-cigarettes are more likely to have ever been used by adults 18 - 34 years of age.
- Surprisingly, e-cigarette use was more prevalent among persons with more education.
- Elderly adults (aged 65 and over) were less aware of e-cigarettes than non-elderly adults (Chapman & Wu, 2014).

*e-Cigarettes*

- Adults who want to stop smoking and switch to e-cigarettes increase the likelihood that they will not quit. Instead these individuals tend to become dual users (CDC, 2015).
- Adults who smoke and switch to e-cigarettes improve their health outcomes by eliminating the disease-related issues of tobacco smoking (CDC, 2015; Farsalinos & Polosa, 2014).

It is estimated that 18 percent of smokers in the United States have tried e-cigs. When the user inhales, airflow is created and the flow trigger is activated. A light-emitting diode (LED) light comes on and the heating element vaporizes the solution in the cartridge into mist. The mist containing the nicotine is what is inhaled by the user (Rahman et al., 2014).

A study by Pepper et al. (2014a) examined how adults learned about e-cigs. The researchers found that smokers tended to band together and share information about e-cigs, as did sole users of e-cigs. The Internet further played a substantial role in reinforcing word-of-mouth messages about e-cigs.

- Youth and young adults, in particular, perceive that e-cigarettes are safe (AVA, 2015). Among young adults, around 12 percent of e-cigarette users have never tried traditional (i.e., combustible/conventional) cigarettes (Chapman & Wu, 2014). Moreover, 20 percent of middle school-age students reported they started using tobacco directly through e-cigarettes. They did not use traditional cigarettes as a gateway—a statistic that raises concern about e-cigs becoming the gateway to traditional (i.e., combustible/conventional) cigarette use (CDC, 2013; Pepper, McRee, &

Gilkey, 2014b). Nevertheless, the literature shows that adolescents who start with e-cigarettes increase the likelihood that they become combustible users (CDC, 2015).

**NYTS results reflect a continuing growing trend in e-cig use among young people (CDC, 2015).**

At the time of this writing, the most current national data about youth and e-cigarettes was collected during 2011-2013. The data collection was part of the National Youth Tobacco Survey (NYTS) and results were not favorable. Survey participants included students in grades 6-12 enrolled in public and private schools. Results reflected a continuing growing trend in e-cig use among young people (CDC, 2015).

	2011	2014
Reported ever using e-cigs	1/20	1/4
Used e-cig in past 30 days	1/50	1/8.1

Source: CDC, 2015

The most disturbing data involving youth and e-cigs focused on exposures to children under the age of six and nicotine poisoning. Calls to the poison control centers are escalating. Researchers conducting a retrospective study using data from the National Poison Data System from January 2012 – April 2015 found 29,141 calls related to nicotine/tobacco product exposures to young children, with e-cigs accounting for 14 percent of the exposures. Moreover, the monthly e-cigarette exposures increased significantly by nearly 1500 percent during the study. Specifically, children exposed to e-cigs had 5.2 times higher odds of hospitalization and 2.6 times higher odds of severe medical outcomes than those who were exposed to cigarettes. The data also revealed that ingestion alone was the most common route for e-cig exposure (Parry, 2016).

## Regulatory Efforts

E-cigs have been banned in 13 countries worldwide, in part due to their potential for promoting substance use in addition to nicotine addiction, as marijuana and other illicit substances can be vaped (Maa, 2015). Until this year (i.e., 2016), the FDA only regulated cigarettes, cigarette tobacco, roll-your-own tobacco, and smokeless tobacco. However, effective August 8, 2016, the FDA's authority is extended to include the regulation of e-cig delivery systems, which includes e-cigs and vape pens, hookah (water pipe) tobacco, all cigars, pipe tobacco, and nicotine gels, among others. Most states had planned or enacted regulation addressing e-cigs, electronic smoking devices, or vapor products (Tremblay et al., 2015). Seventy percent of states

have implemented limited and targeted regulations, e.g., use in limited venues, sale to and/or use by minors). About 16 percent of states have enacted relatively comprehensive regulations such

as use in public places or mixed, diverse regulations. Only seven states (14 percent) had no regulations targeting e-cigs (Tremblay et al., 2015). Awareness regarding the existence of e-cigarettes has grown dramatically across all demographic groups, particularly among current smokers and young adults (Gourdet et al., 2014). It should be noted that Tennessee is one of the states that had laws explicitly addressing e-cigarettes prior to the new FDA ruling.

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**Tennessee is one of the states that had laws explicitly addressing e-cigarettes prior to the new FDA ruling (Gourdet et al., 2014).**

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## Current Issues

How to properly regulate this product continues to be an ongoing debate, particularly as it relates to youth access, the potential of youth for nicotine addiction, and renormalization of the smoking culture. Long-term health effects of vapor inhalation through e-cigs are unknown at this time (Gostin & Glasner, 2014; Tremblay et al., 2015). Furthermore, many questions remain unanswered about the dangers of e-cigs, both to smokers and to those around them (Maa, 2015).

Two early claims of potential benefit of e-cigs over traditional cigarettes have been refuted. There are carcinogens in e-cigarettes and the secondhand vapor from e-cigs contains nicotine or other toxic chemicals, unlike otherwise reported (Maa, 2015). E-cigs also pose health hazards that have not been associated with traditional cigarettes. For instance, parents have made large numbers of calls to poison control centers due to accidental ingestion of liquid nicotine by children. There have also been reports of persons inadvertently putting e-cig fluid into their eyes because they mistook the storage bottles for eye drops (Maa, 2015).

Questions still need to be answered regarding the consequences and toxicity of direct contact of liquid nicotine on the skin. Malfunctioning e-cig batteries and accidental activation of the heating element have ignited fires in homes, high school gymnasiums, and airplanes. The latter results prompted the Federal Aviation Administration (FAA) Safety Alert to recommend a ban on e-cigs in checked baggage. Additional research is continuing (Maa, 2015).

E-cigs may expose bystanders to emissions. A team of researchers observed increased indoor air levels of coarse particulate matter, polycyclic aromatic, hydrocarbons, and aluminum following

### *e-Cigarettes*

indoor vaping sessions lasting two hours each. Pollution in the air, however, does not appear to reach the levels of conventional (i.e., traditional or combustible) cigarettes (EHP, 2014). Some researchers have suggested that the metals in e-cig aerosols be removed to diminish the possibility of adverse health effects from prolonged use (Williams et al., 2015). Typical components of aerosols include nicotine, aerosol, flavorings, and other contaminants including formaldehyde (Samet, 2015).

Issues around the possibility that e-cigs are creating more nicotine addictions than they are attenuating are of great concern. Hence, a regulatory agenda that controls negative use trends while permitting use for cessation, if deemed beneficial, has been recommended. Regulation should control the drivers of negative use such as non-quit –related recreational use. To address this, the product should not be sold at low cost, made widely available, or given access to unfettered marketing (Rahman et al., 2014).

Studies involving healthcare providers have demonstrated their struggles working with clients using e-cigs. A study by Pepper et al. (2014b) showed nearly all (92 percent) of the providers were familiar with e-cigs but only slightly more than 10 percent had actually treated adolescent clients who had used them. Providers did not feel they had sufficient knowledge to work with adolescent clients that used e-cigs and reported discomfort working with them and/or their parents. Providers in this study were physical health practitioners.

States that have legalized or decriminalized the recreational use of marijuana will further need to address the sale of e-cigs pre-loaded with D-9-tetrahydrocannabinol (THC) (Wiesman, 2014). Additionally, adolescents are using e-cigs to vaporize cannabis. The e-cig is modified to allow for vaporization in the form of highly concentrated waxy forms of THC, highly concentrated liquid hash oil, or dried cannabis leaves or buds. Vaporizing cannabis via e-cigs is less conspicuous than the combustible means of smoking cannabis. Of added concern with this method is the fact that the THC concentrations can greatly exceed that of dried cannabis by as much as 30 times (Morean, Kong, Camenga, Cavalio, & Krishnan-Sarin, 2015).

A study by Morean et al. (2015) examined the extent to which young people use e-cigs to vaporize cannabis. The researchers found this practice to be common among high school students, especially if the student reported lifetime dual use of cannabis and e-cigs. The sample included individuals in a state in which both sale of e-cigs and cannabis to people under the age of 18 were illegal. Results indicated lifetime cannabis users, e-cig users, male students, and younger students were more likely to use e-cigs to vaporize cannabis than their peers that did not fall into those categories. The relative safety of this practice is not well established.

The literature shows that adults who vaporize hash oil experience greater evidence of dependence and subjective tolerance than those who smoke combustible cannabis. Such negative observations have been linked to the greater potency of the THC-infused waxes and hash oil compared to combustible cannabis. Adolescents who vaporize tend to engage in this practice in locations where such use is prohibited. Vaporization of cannabis via e-cigs further makes detection by parents/caregivers and/or law enforcement more difficult because the pungent, characteristic odor of smoked cannabis is hidden (Morean et al., 2015).

Also of note is the fact that e-cig ads are the first cigarette ads that our youth have seen on television. Cigarette sponsorship of television programming has been banned in this country since 1998. However, policy relating to conventional (i.e., combustible/traditional) cigarettes are not directly applicable to e-cigs (Wiesman, 2015).

In the meantime, there are actions that can be taken to protect young people from any negative impact associated with tobacco use via e-cigs. Among them are the following:

- Reducing demand for e-cigs through health promotion and public education.
- Reducing supply of e-cigs for licensed retailers. At this writing, the only state to require retailers selling vapor products to purchase a license is Kansas.
  - Raising the legal age for purchases to the age of majority—21 years (Wiesman, 2015).

There are many questions about e-cigs. More rigorous research is needed to answer critical questions about the effects of e-cigs on human health and the potential benefit/risk ratio. Rigorous research will ensure health care professionals can make informed decisions that maximize human safety and minimize the potential ill effects e-cigs may have on clients and the public in general (Palazzolo, 2013).

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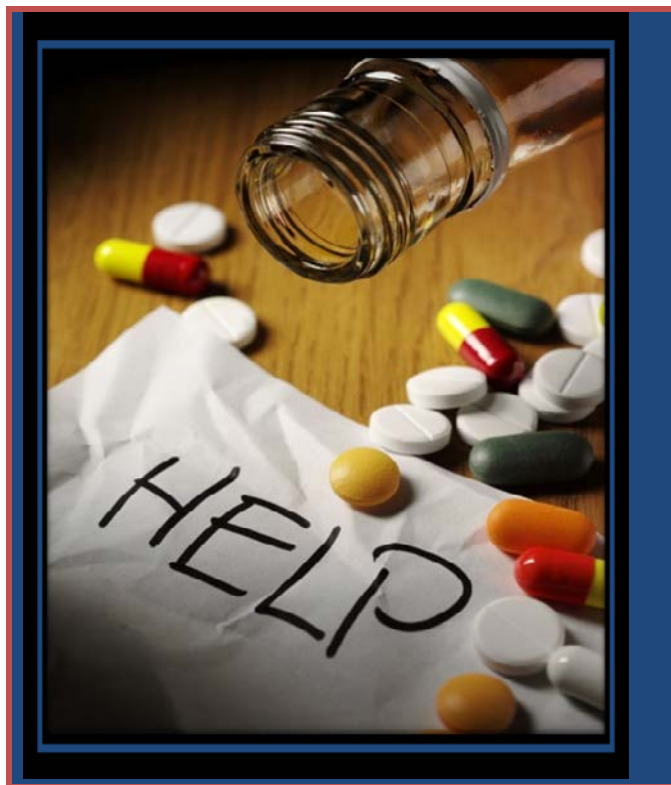
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**APPENDIX C: Child Welfare**

Division of Clinical Leadership in Collaboration with the  
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## Child Welfare

Substance use continues to be one of the most common reasons for involvement with the child welfare system. Parents and/or other caregivers who use/misuse substances can have a negative impact on the safety, permanence, and wellbeing of children and families (DHHS/ACF/CWIG, n.d.). Most studies indicate that parental/caregiver substance use is a contributing factor for between one third to two thirds of the children involved with CPS. Further, research has shown that children of parents/caregivers with substance use disorders (SUDs) are more than four times more likely to be neglected and nearly three times more likely to be abused than children of parents/caregivers without substance issues (DHHS/ACF, 2009). The Tennessee Department of Children's Services (TDCS) reports have indicated that nearly 50 percent of the young people in custody is the result of parent/caregiver substance (TDMHSAS, 2013).

A National Survey on Drug Use and Health (NSDUH) identified 8.3 million children living with a parent who was classified as having an alcohol or other substance use problem. To put this in perspective, this number represents approximately 11 percent of all the children in the United States and says that about three children in every classroom are going home to a parent who needs substance use treatment (Young & Hoffman, 2015).

There is renewed attention to the issue of substance use in child welfare because of the impact that increased use of heroin and opiates is having on the numbers of children entering foster care.

Governors of several states have spoken openly about the impact of substance use on their rising foster care numbers. In fact, the data show that the percentage of children being removed from the home and placed in foster care as a result of parental/caregiver substance use rose from 23 percent in 2004 to 31 percent in 2013. The percentage is likely an

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The data show that the percentage of children being removed from the home and placed in foster care as a result of parental/caregiver substance use rose from 23 percent in 2004 to 31 percent in 2013 (CWLA, 2015).

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undercount since a number of children are removed for multiple reasons, e.g. (CWLA, 2015). Substance use disorders (SUDs) affect the way people live, including how they interact with others, function, and parent their children. Because SUDs impair priorities and judgment of parents/caregivers, parental discipline choices and child-rearing styles can be affected. SUDs also have negative effects on the consistency of supervision and care provided to children. The time and money parents/caregivers spend on using and/or seeking out substances may limit the resources available in the household to meet the children's basic needs. Moreover, families affected by substance use issues frequently experience many other kinds of problems, including mental illness, domestic violence, high levels of stress, and poverty—all of which are linked to child maltreatment (DHHS/ACF, 2009).

The children of parents/caregivers with SUDs and who are also in the child welfare system are more likely to exhibit intellectual, social, and physical problems than children of parents/caregivers without such issues. In addition, children from families affected by substance issues that have been abused and/or neglected are more likely to be placed in foster care and to remain there longer than maltreated children from families with no substance issues (DHHS/ACF, 2009).

Substance use becomes problematic and to the attention of child welfare when it contributes to the harm of children. Yet, distinguishing between “normal” and problematic alcohol use, e.g., can be

blurred and subject to interpretation, making identification difficult for caseworkers (DHHS/ACF, 2009). That is why caseworkers are using a wealth of strategies to prevent substance use/misuse while also improving outcomes for children and families (DHHS/ACF/CWIG, n.d.).

One first step is for child protection services (CPS) caseworkers to conduct an in-home examination of the individuals and environment in and around the home. The following indicators of SUDs should be checked by the caseworker:

- At least one parent/partner appears to be under the influence of a substance, admits to having a substance use disorder (SUD), or exhibits other signs of use/misuse or addiction (for example, needle marks)
- A child or other member of the family, including a partner, reports drug or alcohol use by a parent or kin in the home environment
- There is a scent of drugs or alcohol in the home environment
- Drug paraphernalia (for example, charred spoons, a large number of beer bottles or liquor, a syringe kit) are present in the home environment
- Substance use is included in the CPS report or call (DHHS/ACF, 2009).

This list can be used pre- or post-screening and might be incorporated into every home visit.

Screening should consist of a simple, brief, set of questions that have been validated (DHHS/ACF, 2009). It should be noted that some Tennessee Department of Children's Services supervisors and team leaders have been trained in Screening, Brief Intervention, and Referral to Treatment (SBIRT), funded in part by two TDMHSAS-led grants—Building Strong Families in Rural Tennessee (BSF) and the Therapeutic Intervention, Education, and Skills (TIES) (E. Chappell, personal communication, October 31, 2014). Screening will help the caseworker determine whether a family member requires further evaluation for SUD. As with the in-home examination checklist, screening can become a standard component of the home visit or family assessments. General home visit safety tips, specific safety tips around substances, and screening tools are contained in the document, *Protecting Children in Families Affected by Substance Use Disorders*. The reference citation is provided in this section. Additionally, the document can be downloaded free of charge from <https://www.childwelfare.gov/pubs/usermanuals/substanceuse/substanceuse.pdf> (DHHS/ACF, 2009).

Screenings for SUDs should become a routine part of CPS investigations, case planning and monitoring, and risk and safety assessments. Evidence of SUDs are not always noticeable during the initial investigation and may not emerge until later during a caseworker's interaction with the case. However, the high prevalence of SUDs in families involved in the child welfare system suggests that CPS caseworkers should screen during all stages of a case. While not likely perceived as helpful by the family, screening for SUDs can help identify the likelihood that they exist. Sometimes SUDs are masked by other disorders and vice versa (DHHS/ACF, 2009).

Typically a call is placed to Child Protective Services (CPS) in the Tennessee Department of Children's Services (TDACS) when concerned individuals think a child is at risk of abuse and/or neglect due to substance use issues of the parent or other persons in the child's home environment. This call often results in a home visit by a CPS caseworker.

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**Caseworkers (and others) should refrain from labeling children who have been exposed prenatally to substances (DHHS/ACF, 2009).**

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Caseworkers (and others – anyone who will have contact with the children) should refrain from labeling children

who have been exposed prenatally to substances. For example, labeling a child as a “NAS baby” or “meth baby” can result in the child and/or others having lower expectations for academic and life achievements while ignoring other reasons for the social and physical problems the child may encounter (DHHS/ACF, 2009).

Today it is likely that child welfare workers will encounter an increase in the number of cases involving opioid misuse and dependence among pregnant and parenting women. This means that more families with babies will be coming to the attention of the child welfare system, as hospitals are reporting increases of infants born with neonatal abstinence syndrome (NAS). For such cases, a coordinated, multi-systemic approach that is grounded in early identification and intervention can assist both the child welfare and treatment systems in conducting comprehensive assessments as well as ensuring access to the range of services that will be needed by these families. Thus, *A Collaborative Approach to the Treatment of Pregnant Women with Opioid Use Disorders* has been developed and is available for download to assist child welfare workers in successfully setting collaborative planning and implementation of services in motion. This resource is available from [https://ncsacw.samhsa.gov/files/Collaborative\\_Approach\\_508.pdf](https://ncsacw.samhsa.gov/files/Collaborative_Approach_508.pdf).

The Child Welfare Information Gateway (CWIG) Web site houses a wealth of information on substance use and its impact on children that may come to the attention of child welfare. Included among the information on the Web site are general resources for preventing substance use in children and families. In addition, there are prevention resources for targeted populations that address specific protective and risk factors associated with substance use. Resources on assessment, casework practice, treatment services, cross-system collaboration, and supports for families are also available (CWIG, n.d.).

Other resources for child welfare professionals can be found on the Children's Bureau Web site. (The Children's Bureau is an office of the Administration for Children and Families.) One such resource is the primer *Understanding Substance Use Disorders, Treatment and Family Recovery: A Guide for Child Welfare Professionals* (Breshears, Yeh, & Young, 2009). This primer covers alcohol and other substance addiction, along with substance use treatment and recovery. Topics encompass treatment readiness and effectiveness, cross-system communication and collaboration, and contact information for other national resources (Children's Bureau, n.d.).

Finally, if the Family First Prevention Services Act of 2016 passes and is signed into law, child welfare would have financial and intervention resources for alternatives to foster care. Passage of this Act would reduce the cost and trauma of out of home placements of children whose parents have substance use problems. Title IV-E funds could be used for treating parents with substance use disorders by paying for residential substance abuse treatment or providing in-home and/or other services to keep families together. New Regional Partnership Grants would be created and existing

RPGs could be reauthorized. Tennessee currently has two RPGs: Helen Ross McNabb's New Beginning program and TDMHSAS' Therapeutic Intervention, Education, & Skills (TIES) project (ADAW, 2016).

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Department of  
**Mental Health &  
Substance Abuse Services**



8/15/2016

## **Substance Use Best Practice Tool Guide**

### **APPENDIX D: Sexual Minority Populations**

Division of Clinical Leadership in Collaboration with the  
Division of Substance Abuse Services

## **Sexual Minority Populations**

It is not surprising that individuals classified as sexual minorities have substance use issues. Sexual minorities face stigma, prejudice, heteronormativity, rejection, and internalized homophobia on a continuous basis (Dentato, 2012). Moreover, the mere fact that an individual falls into the sexual minority category also appears to place the individual at elevated risk of substance use problems and addictions (Hartney, 2014).

Sexual minorities comprise groups of people whose sexual characteristics, sexual orientation, or gender identity differ from the presumed majority of the population. Basically the term is used to describe individuals with a sexual orientation that is not exclusively heterosexual (Hartney, 2014; Math & Seshadri, 2013; Telingator & Woyewodzic, 2011). Lesbians, gays, bisexuals, and transgenders can be subsumed under the sexual minority category. Most often, however, individuals in these four groups are referenced as LGBT (SAMHSA/CSAT, 2012). Sexual minorities who are younger in age, especially those under the age of 18, may instead be referenced as LGBTQ. The “Q” represents the questioning phase of adolescents around their gender identity and/or sexual orientation (DHHS/OAH, 2015).

We do not have an accurate count of persons that identify as sexual minorities. The stigma and other negativity around the issue prevent many sexual minorities from opening up about their identity. The Kinsey Report, based on data collected by the Institute, estimates that 10 percent of the male population and five to six percent of the female identify as preferring same-sex relationships. The Report uses sexual behavior, as reported on a survey, to construct these estimates. Sexual behavior is a continuum that is rated on a scale from zero to six. Higher values are represented of more same-sex behavior. The majority of the Kinsey survey participants reported behavior in the bisexual range. For minority racial and/or ethnic populations, in particular, it appears to be a more acceptable to report bisexual behaviors versus homosexual behaviors. Estimates for transgender persons are substantially more difficult to establish. Nevertheless, projections hover around one percent (SAMHSA/CSAT, 2012).

Like their non-LGBT counterparts, members of sexual minority groups experiment with substances, including alcohol. However, the literature indicates their level of use may be exceptionally high, especially when compared to the general population. Sexual minorities experience undue stigma and tension as part of their marginalized community (SAMHSA/CSAT, 2012). If they seek help and/or care, they typically encounter culturally incompetent health care (i.e., behavioral and physical health) services that add to the rage, resentment, and devaluing thoughts and feelings that serve to fuel substance use (Hunt, 2012). Issues with health care providers additionally lead to considerable distrust by persons identifying as sexual minorities, hence reducing the likelihood that treatment will be sought (Bauer & Wayne, 2005). As youth, they are under pressure to conform so “coming out” can be particularly difficult, even traumatic. Young people who identify as LGBT or LGBTQ may be subject to greater exploitation and/or sexual abuse related to their low self-esteem and insecurity. Families and/or friends may not be kind to these youth if they “come out”. Consequently, they may become targets of physical and verbal abuse and may even run away from home and find themselves trying to make it on the streets. As the youth get older and move into young adulthood or simply get tired of the “in-house” rejection, their social lives may commonly revolve around bars or other settings that promote substance use (SAMHSA/CSAT, 2012).

Sexual minorities, especially gay and transgender populations, are disproportionately represented in substance use where percentages range from 20 to 30 percent compared to nine percent for the general population (Hunt, 2012; Redding, 2014). They even smoke cigarettes at higher rates than

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the general population. Fallin, Goodin, Lee, & Bennett (2015) studied the smoking characteristics of individuals identified as LGBT. They found that women identifying as bisexual had the highest proportion of current smokers, followed by lesbians, then heterosexual women. The same pattern was found for men. When initiation age was examined, women identifying as bisexual started at the youngest age, followed by lesbians, and finally heterosexual women at the oldest age. Females that identified as bisexual were most likely to report illicit substance use, compared to their heterosexual counterparts. For males, gays were older when they smoked their first cigarette than their heterosexual peers (SAMHSA/CSAT, 2012). About 25 percent of sexual minorities use/misuse alcohol compared to between five and 10 percent of the general population (Hunt, 2012). Certain substances also appear to be more popular in the sexual minority community (SAMHSA/CSAT, 2012).

A study by Woody and colleagues found men who acknowledged as gay 21 times more likely to use nitrite inhalants than their non-gay peers. These men were four to seven times more likely to use sedatives, stimulants, tranquilizers, and hallucinogens than their non-gay counterparts. Weekly use of marijuana, cocaine, and stimulants was two times more likely and weekly use of inhalant nitrites 33 times more likely for men identifying as gay versus the non-gay peers. Another study by Cochran and her research partners observed higher rates of alcohol use for lesbians than for heterosexual women. Compared to heterosexual women, lesbians were four times more likely to get intoxicated every week, five times more likely to use alcohol every day, and two times more likely to have used alcohol in the past month (SAMHSA/CSAT, 2012). More frequent heavy drinking also has been reported for women identifying as bisexual and lesbian versus heterosexual women, especially for the 20-34 year-old age group (Green & Feinstein, 2012).

In particular, women identifying as LBT (i.e., lesbian, bisexual, and transgender) appear to have elevated stress that contributes to their use of alcohol and other substances. Some programs have conducted focus groups with these women and found the term 'stress' was used an inordinate number of times. Of further note is the fact that the mention occurred in the context of school, family, peer relationships, housing, and/or in association with being a woman identifying as LBT. Use of the term 'stress' was entirely unsolicited (Stevens, 2012).

Not surprising, issues that contribute to substance use in sexual minorities seem to be amplified for persons who identify as transgender (Stevens, 2012). Methamphetamine use has increased dramatically among transgender individuals, specifically male-to-female. Its use is still prevalent among men who identify as gay and some groups of lesbians as well. Methamphetamine use has become an integral part of sexual activities for a certain segment of men identifying as gay, especially in a number of urban communities. In addition, urban studies have shown that men identifying as bisexual and gay and also use speed, either alone or in combination with other substances, tend to have much higher seroprevalence rates than other men. Included in the other men are those identifying as gay and bisexual who do not use speed and/or its combination, as well as heterosexual men who inject drugs. Those who inject drugs are a very stigmatized and hidden group and many times includes individuals who identify as LGBT. Unfortunately, public health efforts primarily target heterosexual men that inject heroin and hence miss the mark for the untargeted users. Party drugs such as methylenedioxymethamphetamine (MDMA), 'Special K', and gamma hydroxybutyrate (GHB) have further become increasingly popular at celebrations like raves and circuit parties and at dances aimed at individuals subsumed under the sexual minority heading (Green & Feinstein, 2012; SAMHSA/CSAT, 2012).

Stresses youth identifying as LGBTQ encounter put them at greater risk for numerous behavioral health issues, including substance use and depression (CDC, 2014). A study examining the relationship between neighborhood factors and illicit substance use among youth that were sexual

### *Sexual Minority Populations*

minorities found significantly greater prevalence of marijuana use for these young people in neighborhoods with a higher prevalence of LGBT assault hate crimes. The relationships were not observed in their heterosexual peers. Moreover, the results were specific to LGBT assault hate crimes. There was no link to the neighborhood's overall crime rate (Duncan, Hatzenbuehler, & Johnson, 2014).

A study by Kecojevic et al. (2012) explored initiation of prescription drug misuse for LGBT and heterosexual high-risk young adults (ages 16-25). Participants came from two major cities in the United States: New York and Los Angeles. Prescription drugs included stimulants, opioids, and tranquilizers. Results showed that for young adults that identified as LGBT: 1) the age of first prescription was associated with initiation; 2) there was earlier initiation of tranquilizers and prescription opioids; 3) there were more reports of childhood abuse; and 4) there was earlier misuse of tranquilizers for those experiencing emotional abuse.

## Treatment

Providers should understand that sexual minorities do not know the reaction they will get if and when they mention their sexual orientation. Many times, these individuals have been the target of threats and nearly one fourth have reported physical attacks because of their sexual orientation. As a result, staff may not be aware that they are treating individuals that identify as a sexual minority. Furthermore, substance use treatment programs may not be aware that they have staff members who identify as a sexual minority and who could be a great resource for treating clients who have so identified (SAMHSA/CSAT, 2012).

Treatment providers would do well to consider the children, family of origin, partner, and/or family of choice when providing care. Issues of concern for persons who identify as sexual minority as they grow older might be the human immunodeficiency virus- (HIV-) losses they have experienced, not having children, and/or being isolated from their family of origin. Moreover, providers need to remember that persons who identify as a sexual minority live and work in all segments of society just as individuals that are not part of that population. Some live in rural communities and others come from urban areas. Hence,

providers of substance use treatment services must understand the struggles of persons who identify as sexual minorities and create a safe and supportive treatment space (SAMHSA/CSAT, 2012).

**Providers of substance use treatment services must understand the struggles of persons who identify as sexual minorities and create a safe and supportive treatment space (SAMHSA/CSAT, 2012)**

In general, successful substance use treatment programs that treat the LGBT community will be particularly sensitive about maintaining confidentiality. Such information can be safeguarded by:

- Educating staff and clients about regulations affecting persons in their jurisdiction who identify as a sexual minority.
- Encouraging clients to conduct legal inventory of their parental, marital, and employment statuses. Also assess the steps they might take to protect themselves and their rights.

### *Sexual Minority Populations*

- Cautioning clients to think carefully about how to self-disclose, how that information will be received, and whether their privacy will be respected before disclosing their sexual orientation to others.
- Respecting the confidentiality of clients and establishing a written policy that ensures that information about sexual orientation is confidential. Policy and procedures should be in place to ensure that such information will not be communicated to any persons outside the program without their consent (SAMHSA/CSAT, 2012).

Counselors and therapists with clients who identify as sexual minorities contend that traditional approaches work but the provider must be culturally sensitive in delivering them. Therefore, the gay affirmative practice (GAP) approach has been highly recommended to facilitate delivery of services that incorporate cultural sensitivity. This approach offers guidelines for beliefs and behaviors, primarily for social work practice, in working with this population (Redding, 2014). The six guiding principles of the GAP model are:

1. Accept identification as gay, lesbian, or bisexual as a positive outcome of the helping process.
2. Become knowledgeable about different theories around the coming-out process.
3. Believe that homophobia in the client and society is the problem as opposed to sexual orientation.
4. Deal with one's own biases around heterosexual and homophobia.
5. Do not assume that a client is heterosexual.
6. Work with clients to reduce internalized homophobia that they may be experiencing so they can achieve a positive identity (Redding, 2014).

Specialized substance use treatment programs that only serve persons who identify as sexual minorities have been shown to effectively serve the population. However, such programs are scarce and unavailable in a majority of communities. Some researchers, however, argue that the substance use treatment needs of persons who identify as a sexual minority should be met in a mixed setting. Of course, other experts support the need for both types of programs. There are a multiple ways to effectively and efficiently serve this population (Stevens, 2012).

Primary care physicians may be the most common service provider for persons that identify as a sexual minority, even for substance use treatment. Thus, it is imperative that medical students, medical doctors, and other health care professionals receive specific training around how to work successfully with this population. Assessment should be non-judgmental and include sexual orientation. The initial assessment should be thorough, collecting information around all experiences, positive and negative. During assessment and treatment, every reasonable effort should be made to refrain from making assumptions about social norms and health risks associated with identifying someone as a sexual minority. For example, staff should not make the assumption that “Sally” does not have HIV because she has identified as a lesbian. Women identifying as lesbian, particularly if they are also bisexual, have often engaged in risky intimate behaviors with at-risk men. Additionally, women identified as lesbian tend to report using drugs involving needle use to a greater extent than heterosexual women (Stevens, 2012).



Language is another critical aspect of treatment for people who identify as a sexual minority. Stereotypic language and jokes about the any segment of the population should not be used. Communication with the client should involve asking which pronoun that he or she prefers to go by as well as encouraging other clients to use the pronoun of choice. It is further possible that the counselor may need to develop his or her own materials for use with the client. Many treatment

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**Not all persons who identify as a sexual minority will disclose such information (SAMHSA/CSAT, 2012).**

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workbooks use heterosexual examples, which can turn off clients who have identified as a sexual minority (Stevens, 2012).

Let us be clear: Not all persons who identify as a sexual minority will disclose such information. However, they must be able to say “I am who I am, and I accept myself as myself” (p.64) (SAMHSA/CSAT, 2012). For some clients who identify as a sexual minority, having a counselor who can accept and validate his or her attractions, experiences, feelings, and identities will play an important role in helping the client move toward sobriety. Other clients may need more help. For the latter clients, counselors can assess the stage of coming out and understand the needs and risks of the client at that stage, using Cass’ or a similar identity stage model. The most effective identity-stage models resemble Prochaska, Norcross, and DiClemente’s stages-of-change model (SAMHSA/CSAT, 2012).

Youth who identify as a sexual minority have issues similar to those of adults. Moreover, people are no more tolerant of adolescents as with adults. In fact, they may even be less tolerant. Many youth identifying as a sexual minority live in hostile environments and must try as best they can to create or locate positive environments. For many, substance use is their plan of escape (SAMHSA/CSAT, 2012).

College campuses sometimes provide the same unwholesome environment for people who identify as a sexual minority as the larger society. These students experience incivility, e.g., rudeness and a lack of dignity and respect, and hostility on campus. They also feel unsafe, with many being harassed and subjected to violence. Similarly, the college campus is a place where sexual minorities witness incivility and hostility toward their peers in general. Results from a study by Woodford, Krentzman, & Gattis (2012) showed that experience or perception of incivility increased the odds of any drinking by 39 percent and of problematic drug use by 58 percent. Helping students who identify as sexual minorities develop effective coping mechanisms when faced with campus-based mistreatment will be critical.

## **Working with Clients Who Identify as Lesbian.**

Regardless how much (or little) the counselor knows about persons that identify as lesbian, he or she must be caring. Furthermore, the counselor should be informed and sensitive. Start with what is known about women and take the time and make the effort to understand the special problems of individuals that identify as lesbians. Treatment suggestions include:

- Empowering the client.
- Honoring diversity.
- Using nonjudgmental language.



- Avoiding labeling.
- Support and exploring, but not confronting the client.
- Respecting the client's position, whatever that may be (I'm a lesbian and proud of it!; I'm confused; I'm not a lesbian!).
- Respecting the unwillingness of some individuals who identify as lesbians to attend Alcoholics Anonymous (AA) or Narcotics Anonymous (NA). They may consider these programs "male" institutions with no room for them as women and especially as persons who identify as lesbian. Such meetings may also be resisted because of the emphasis on powerlessness, which they feel emphasizes their status as victims (SAMHSA/CSAT, 2012).

### **Working with Clients Who Identify as Gay.**

Similar to counselors working with people who identify as lesbians, the counselor working with men who identify as gay must be caring, sensitive, and informed. In particular, the counselor likely needs to deal with the client's denial. Used as a defense mechanism, denial appears to be particularly strong with amphetamine use/misuse. Many men who identify as gay use 'speed' intravenously and do not think they have a problem with substance use. The counselor will need to point out the current and possible effects of such use, e.g., loss of time at work or health problems (SAMHSA/CSAT, 2012).

Even for men who report that they have come out and are very comfortable being gay, the client may not have addressed the internalized homophobia they picked up from growing up in a homophobic society. The counselor will need to discuss self-acceptance with the client and any shame and/or doubt that he may be dealing with (SAMHSA/CSAT, 2012).

Counselors further have to work with the client in exploring other social avenues and/or developing new skills to avoid alcohol and substance use in the current environment. The counselor will have to address the possibility of the client's making new friends. Encouraging safer sex practices and providing or referring him to information regarding such practices and their benefits should also be part of the intervention (SAMHSA/CSAT, 2012).

### **Working with Clients Who Identify as Bisexual.**

Recovery from substance use and addiction for these individuals will be facilitated by counselors who are empathetic and nonjudgmental and support their clients in:

- Recovery from substance use and addiction for these individuals will be facilitated by counselors who are empathetic and nonjudgmental and support their clients in:
- Becoming more self-accepting.
- Healing from the shame cause by internalized biphobia and heterosexism

- Referring them to either gay/lesbian or straight 12-step fellowships, or both, depending on what is more appropriate to their recovery needs (SAMHSA/CSAT, 2012).

## **Working with Clients Who Identify as Transgender.**

Persons who identify as transgender share many of the issues that led to substance use/misuse by those who identify as lesbian, gay, and/or bisexual. However, violence and discrimination may be more pronounced for these clients (SAMHSA/CSAT, 2012). Researchers Lombardi, Wilchins, Priesing, & Malouf (2001) found that 60 percent experienced some form of violence and/or harassment sometime during their lives and 37 percent experienced some form of economic discrimination.

Hence, there are a multitude of issues that must be addressed when working with clients who identify as transgender, including what to call the individual. Every effort should be made to prevent staff from making transphobic comments or putting these clients at risk for sexual or physical abuse or harassment. A provider's introduction guide to LGBT provides critical do's and don'ts (SAMHSA/CSAT, 2012)

## **Other Resources**

A multitude of clinician resources can be obtained from the Association for Lesbian, Gay, Bisexual, and Transgender Issues in Counseling. The Web site can be accessed from <http://www.algbtic.org/>. In addition, the Substance Abuse and Mental Health Services Administration (SAMHSA) released a practitioner's resource guide to engage and help families and caregivers to support their children who have identified as a sexual minority (Redding, 2014). This resource can be downloaded or ordered from <http://store.samhsa.gov/shin/content//PEP14-LGBTKIDS/PEP14-LGBTKIDS.pdf>.

## **Conclusion**

While recommendations and resources for treating persons who identify as sexual minorities exist, the extent to which treatment facilities implement these approaches remains questionable at best. The literature indicates that a number of substance use treatment counselors do not feel that their training has been adequate for them to work successfully with persons that identify as LGBT. Fortunately many counselors report having accepting and/or neutral attitudes toward individuals that identify as lesbian and/or gay. However, their attitudes toward clients that identify as bisexual and transgender are not positive. In fact, they may be viewed as negative, close to hostile. Counselor training will be essential in helping them better understand and provide the appropriate treatment needs for their clients that identify as sexual minorities. Such training will allow the counselors to examine their own biases as well (Stevens, 2012).

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