

# ***Substance Use, HIV, and Youth: What Clinicians Need to Know***

## **Trainer Guide**



Pacific Southwest  
**ATTC**



# Substance Use, HIV, and Youth: What Clinicians Need to Know

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# Substance Use, HIV, and Youth: What Clinicians Need to Know

## Background Information

The purpose of this introductory training is to provide HIV clinicians (including, but not limited to physicians, dentists, nurses, and other allied medical staff, therapists and social workers, and counselors, specialists, and case managers) with a detailed overview of substance abuse and HIV among youth. The curriculum reviews important epidemiological data focused on adolescent substance use trends and HIV prevalence; reviews standardized screening and assessment techniques to support the move to improve treatment effectiveness; and concludes with evidence-based and promising clinical strategies. The introductory training includes a 133-slide PowerPoint presentation, Trainer Guide, and a companion 2-page fact sheet. The duration of the training is approximately 90-120 minutes, depending on whether the trainer chooses to present all of the slides, or a selection of slides. For example, slides 43-54 represent a general introduction of HIV/AIDS, and can be eliminated if your audience already has a broad knowledge base with regards to HIV/AIDS education.

“Test Your Knowledge” questions have been inserted at the beginning and end of the presentation to assess a change in the audience’s level knowledge after the key content has been presented. An answer key is provided in the Trainer’s notes for **slides 4-8** and **slides 128-132**.

## What Does the Training Package Contain?

- PowerPoint Training Slides (with notes)
- Trainer’s Guide with detailed instructions for how to convey the information and conduct the interactive exercises
- Two-page fact sheet entitled, “*Substance Use, HIV, and Youth: Tips for HIV Clinicians*”

## What Does This Trainer’s Manual Contain?

- Slide-by-slide notes designed to help the trainer effectively convey the content of the slides themselves
- Supplemental information for select content to enhance the quality of instruction
- Suggestions for facilitating the “Test Your Knowledge” questions and group activities/role plays
- Copy of the CRAFFT screening tool

## How is This Trainer’s Guide Organized?

For this manual, text that is shown in bold italics is a “***Note to the Trainer.***” Text that is shown in normal font relates to the “Trainer’s Script” for the slide.

It is important to note that some slides in the PowerPoint presentation contain animation. Animations are used to call attention to particular aspects of the information or to present the information in a stepwise fashion to facilitate both the presentation of information and participant understanding. Getting acquainted with the slides, and practicing delivering the content of the presentation are essential steps for ensuring a successful, live training experience.

## General Information about Conducting the Training

The training is designed to be conducted in medium-sized groups (30-50 people). It is possible to use these materials with larger groups, but the trainer may have to adapt the small group exercises to ensure that there is adequate time to cover all of the content.

## Materials Needed to Conduct the Training

- Computer with PowerPoint software installed (2003 or higher version) and LCD projector to show the PowerPoint training slides.
- When making photocopies of the PowerPoint presentation to provide as a handout to training participants, it is recommended that you print the slides three slides per page with lines for notes. Select “pure black and white” as the color option. This will ensure that all text, graphs, tables, and images print clearly.
- Flip chart paper and easel/white board, and markers/pens to write down relevant information, including key case study discussion points.

## Overall Trainer Notes

It is critical that, prior to conducting the actual training, the trainer practice using this guide while showing the slide presentation in Slideshow Mode in order to be prepared to use the slides in the most effective manner.

## Icon Key



Note to Trainer



Activity



References





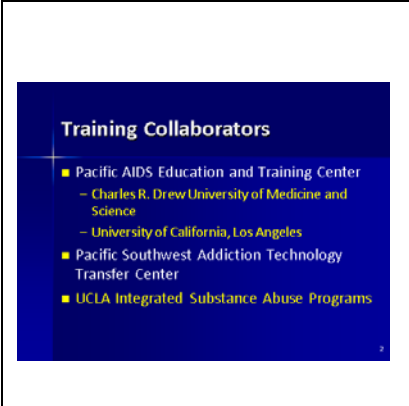
Audience Response System  
(ARS)-Compatible Slide

# Substance Use, HIV, and Youth: What Clinicians Need to Know

## Slide-By-Slide Trainer Notes

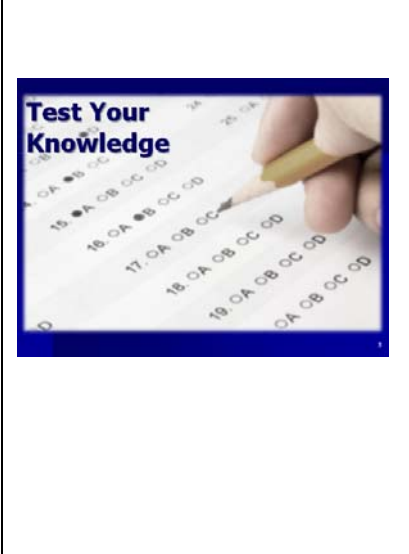
The notes below contain information that can be presented with each slide. This information is designed as a guidepost and can be adapted to meet the needs of the local training situation. Information can be added or deleted at the discretion of the trainer(s).

 The thumbnail shows a blue background with the title 'Substance Use, HIV, and Youth: What Clinicians Need to Know' at the top. Below the title is a circular image of diverse people's faces. Underneath the image are fields for 'TRAINER NAME', 'TRAINING DATE', and 'TRAINING LOCATION'. At the bottom, there are logos for ATTC, CDC, and the National Center for HIV/AIDS, Dermatology and STDs.	<p><b>Slide 1: Title Slide</b></p>  A black silhouette of a person standing at a podium, facing right. <p><i>Welcome participants and take care of housekeeping announcements, such as location of restrooms, turning off cell phones, participating actively, etc.</i></p> <p><i>The purpose of this introductory training is to provide HIV clinicians (including, but not limited to physicians, dentists, nurses, and other allied medical staff, therapists and social workers, and counselors, specialists, and case managers) with a detailed overview of substance abuse and HIV among youth. The curriculum reviews important epidemiological data focused on adolescent substance use trends and HIV prevalence; reviews standardized screening and assessment techniques to support the move to improve treatment effectiveness; and concludes with evidence-based and promising clinical strategies. The introductory training includes a 133-slide PowerPoint presentation, Trainer Guide, and a companion 2-page fact sheet. The duration of the training is approximately 90-120 minutes, depending on whether the trainer chooses to present all of the slides, or a selection of slides. For example, slides 43-54 represent a general introduction of HIV/AIDS, and can be eliminated if your audience already has a broad knowledge base with regards to HIV/AIDS education.</i></p> <p><i>“Test Your Knowledge” questions have been inserted at the beginning and end of the presentation to assess a change in the audience’s level knowledge after the key content has been presented. An answer key is provided in the Trainer’s notes for slides 4-8 and slides 128-132.</i></p>
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**Slide 2: Training Collaborators**

This PowerPoint presentation, Trainer Guide, and companion fact sheet were developed by Beth Rutkowski, M.P.H. (Associate Director of Training of UCLA ISAP) and Thomas Freese, Ph.D. (Director of Training of UCLA ISAP and Principal Investigator/Director of the Pacific Southwest ATTC) through supplemental funding provided by the Pacific AIDS Education and Training Center, based at Charles R. Drew University of Medicine and Science. We wish to acknowledge Phil Meyer, LCSW, Maya Gil-Cantu, MPH, and Tom Donohoe, MBA, from the PAETC.

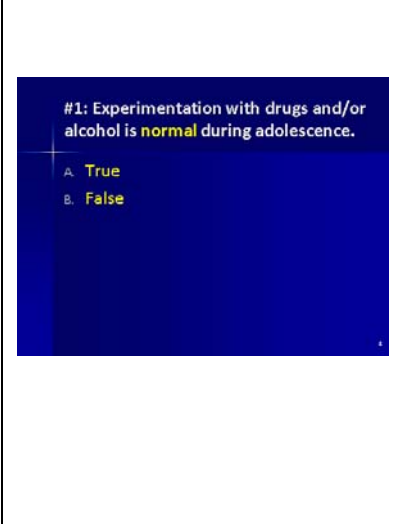


**Slide 3 [Transition Slide]: Test Your Knowledge Questions**



*The purpose of the following five questions is to test the pre-training level of substance use and HIV knowledge amongst training participants. The questions are formatted as either multiple choice or true/false questions. Read each question and the possible responses aloud, and give training participants time to jot down their response before moving on to the next question.*

***Do not reveal the answers to the questions until the end of the training session (when you re-administer the questions that appear on slides 124-128).***



**Slide 4: Test Your Knowledge Question #1**



***Read the question and choices, and review audience responses out loud.***



\*\*Audience Response System (ARS)-compatible slide

#2: Substance use during adolescence may result in all of the following **except**:

- A. Memory problems
- B. Learning problems
- C. Intoxication (motor impairment and sedation)
- D. Substance Dependence

### Slide 5: Test Your Knowledge Question #2



*Read the question and choices, and review audience responses out loud.*



\*\*Audience Response System (ARS)-compatible slide

#3: Who has the **higher rate of current alcohol use** among youth aged 12-17?

- A. Females
- B. Males
- C. Rates are equal

### Slide 6: Test Your Knowledge Question #3



*Read the question and choices, and review audience responses out loud.*



\*\*Audience Response System (ARS)-compatible slide

#4: Among females who are at risk for or are HIV+, all of the following variables predict substance abuse **except** being:

- A. Younger
- B. HIV positive
- C. Homeless
- D. Involved in the criminal justice system
- E. Positive for an STD
- F. Involved in survival sex
- G. Engaged in risky sex

### Slide 7: Test Your Knowledge Question #4

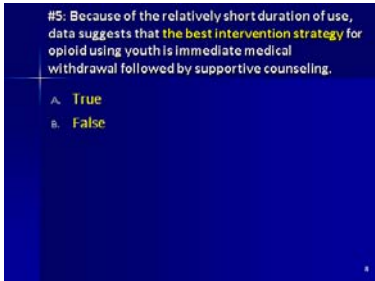


*Read the question and choices, and review audience responses out loud.*



\*\*Audience Response System (ARS)-compatible slide





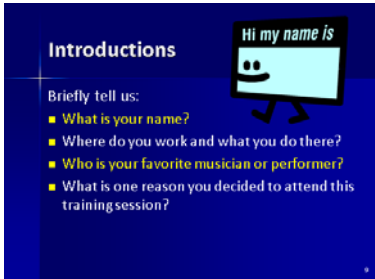
### Slide 8: Test Your Knowledge Question #5



*Read the question and choices, and review audience responses out loud.*



\*\*Audience Response System (ARS)-compatible slide



### Slide 9: Introductions



*In an effort to break the ice and encourage group interaction, take a few minutes to ask training participants to briefly share the answers to these four questions. You can ask for several volunteers to share their responses, if the size of your audience prevents all participants from sharing.*

*If the group is too large for formal introductions, the trainer can quickly ask participants the following two questions to gauge their work setting and professional training:*

- 1. How many [case managers, MFTs or LCSWs, counselors, administrators, physicians, PAs, nurse practitioners, nurses, medical assistants, dentists, etc.] are in the room? Did I miss anyone? {elicit responses}*
- 2. How many people work in a [substance abuse, mental health, primary care, infectious disease] setting? Did I miss any settings? {elicit responses}*



**Slide 10: Activity – “After the Party” – A Video from hiv.drugabuse.gov**



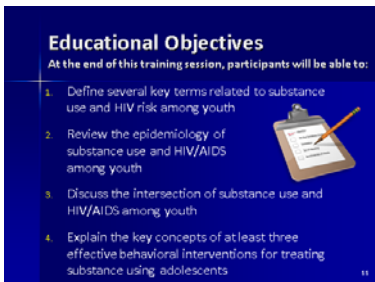
**\*\*Allow 3-5 minutes for this activity\*\***

***Be sure to practice with the video ahead of time. If you have difficulty playing the video, refer to the instructions below or the trainer’s guide for alternate ways of accessing it.***

***\*\*How to Insert the Video: This slide will contain a short video clip that will play when the trainer clicks on the static image. In order for this to work, the video needs to be inserted into the presentation. You can access the video from the <http://hiv.drugabuse.gov/english/message/psas.html> (hyperlink included at the top of the slide). Alternately, the video will be included in the package of training materials that is posted to the PSATTC Products and Resources page ([www.psattc.org](http://www.psattc.org)). From the INSERT menu in PowerPoint, select “video (or movie).” Select the “After the Party” video file. When prompted, indicate that the movie should play automatically and full screen. Once the video is inserted into the PowerPoint presentation, you need to maintain a direct connection between the PowerPoint presentation and the video file. When moving the PowerPoint file to another location on your computer or to another computer, make sure to always move the “After the Party” video file along with it. If the link becomes broken, the video will need to be reinserted.***

***To play the video, hover over the video image to make the video controls appear. Click on the play button. The video should display full screen.***

***Facilitate a 2-3-minute discussion with participants once the video has played regarding their impressions.***



**Slide 11: Educational Objectives**

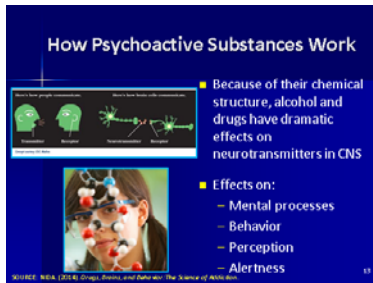


***Briefly review each of the educational objectives with the audience.***



### **Slide 12: An Introduction to Key Terms and Definitions**

This section of the presentation introduces participants to several important terms and concepts that will help set the stage for a more in-depth overview of substance abuse and HIV among youth. The slides focus on a description of psychoactive substances, designer/synthetic drugs, reasons why people use psychoactive substances. If you are presenting to a SUD-savvy audience, you may decide to skip over some of the slides you feel are not essential to review.



### Slide 13: How Psychoactive Substances Work

Most substance use disorders involve **psychoactive substances**. A psychoactive substance affects human behavior by interfering with brain chemistry and neurotransmitter activity. Alcohol and drugs that are commonly abused are psychoactive because of their chemistry. When absorbed into the body, alcohol and drugs interact with the cells and modify the way many cells, organs, and systems function. Because of their chemical structure, they have particularly dramatic effects on neurotransmitters in the Central Nervous System (CNS).

**Neurotransmitters** are endogenous chemicals that transmit signals from a neuron to a target cell across a **synapse** (the point of connection between two neurons). Neurotransmitters are packaged into **synaptic vesicles** clustered beneath the membrane in the axon terminal, on the presynaptic side of a synapse. They are released into and diffuse across the synaptic cleft, where they bind to specific receptors in the membrane on the postsynaptic side of the synapse. Release of neurotransmitters usually follows arrival of an **action potential** at the synapse, but may also follow graded electrical potentials. Low level "baseline" release also occurs without electrical stimulation. Many neurotransmitters are synthesized from plentiful and simple precursors, such as amino acids, which are readily available from the diet and which require only a small number of biosynthetic steps to convert. Neurotransmitter image credit: Bertha K. Madras ([http://www.drugabuse.gov/sites/default/files/images/soa\\_013.gif](http://www.drugabuse.gov/sites/default/files/images/soa_013.gif), Accessed October 2013).

Some drugs, such as marijuana and heroin, have chemical structures that are similar to neutral neurotransmitters, so they can lock on to and activate receptor cells. Other drugs, such as amphetamine or cocaine, cause neurons to release abnormally large amounts of neurotransmitters, or prevent their reuptake. By interfering with the way neurotransmitters function, drugs and alcohol affect many mental processes and behavior. Things like memory, attention, behavior, perception, and alertness are all changed because of what drugs and alcohol do to the neurotransmitters in the CNS.

*(Notes for Slide 13, continued)*

### Slide 13: How Psychoactive Substances Work

#### Additional Information for the Trainer(s)

When absorbed into the body, drugs interact with and modify cells, organs, and bodily systems by:

- Altering the way the body normally functions (increasing, slowing, or enhancing bodily processes, or level or quality of functioning),
- Altering the operation of tissues, organs, and systems,
- Affecting hormones and enzymes, and
- Impacting processes such as digestion, respiration, circulation, and mental functioning.



#### REFERENCE:

NIDA. (2014). *Drugs, Brains, and Behavior: The Science of Addiction*. Rockville, MD: U.S. Department of Health and Human Services, National Institutes of Health.

#### Commonly Used Psychoactive Substances

SUBSTANCE	EFFECTS
Alcohol (liquor, beer, wine)	euphoria, stimulation, relaxation, lower inhibitions, drowsiness
Cannabinoids (marijuana, hashish)	euphoria, relaxation, slowed reaction time, distorted perception
Opioids (heroin, opium, many pain meds)	euphoria, drowsiness, sedation
Stimulants (cocaine, methamphetamine)	exhilaration, energy
Club Drugs (MDMA/Ecstasy, GHB)	hallucinations, tactile sensitivity, lowered inhibition
Dissociative Drugs (Ketamine, PCP, DXM)	feel separated from body, delirium, impaired motor function
Hallucinogens (LSD, mushrooms, Mezcaltine)	hallucinations, altered perception

### Slide 14: Commonly Used Psychoactive Substances

The purpose of this slide is to provide an overview of the most commonly used psychoactive substances—alcohol and other drugs. Review each substance and its main effects with the audience. Tell the audience that this chart can be referenced in daily clinical practice: if they notice clients acting unusually energetic, tired, or odd, it could be because they are under the influence of one of these substances. It is important to note that these categories are not definitive. For example, ecstasy is often counted among stimulants and/or hallucinogens, and the club drugs category often includes Ketamine.

For a fun and basic lesson on how the “classic” drugs work in the brain, participants may wish to view the “Mouse Party,” available at <http://learn.genetics.utah.edu/content/addiction/drugs/mouse.html>.

*(Notes for Slide 14, continued)*

**Slide 14: Commonly Used Psychoactive Substances**

**Additional Information for the Trainer(s)**

**Alcohol:** Many Americans drink alcohol at least occasionally. For many people, moderate drinking is probably safe. Moderate drinking is one drink a day for women or anyone over 65, and two drinks a day for men under 65. Some people should not drink at all, including children, pregnant women, people on certain medicines and people with some medical conditions. Anything more than moderate drinking can be risky. Binge drinking - drinking five or more drinks at one time - can damage health and increase risk for accidents, injuries and assault (1).

Alcohol can cause neurotransmitters to relay information too slowly, creating feelings of drowsiness. It can trigger mood and behavioral changes, including depression, agitation, memory loss, and seizures. Long-term, heavy drinking causes alterations in neurons that can affect motor coordination, temperature regulation, sleep, mood, learning, and memory. One neurotransmitter particularly susceptible to even small amounts of alcohol is glutamate, which affects memory. Researchers believe that because it interferes with glutamate, alcohol causes some people to temporarily “black out,” or forget much of what happened during a night of heavy drinking. Alcohol also causes an increased release of *serotonin*, another neurotransmitter, which helps regulate emotional expression (2).

**Marijuana** is derived from a plant containing more than 400 chemicals. Tetrahydrocannabinol (THC) is the main psychoactive ingredient in marijuana. It binds to cannabinoid (CB) receptors, which are highly concentrated in areas of the brain that control pleasure, memory, thought, concentration, sensory and time perception, appetite, pain, and movement coordination. This is why marijuana can have wide ranging effects, including: short-term memory loss, difficulty learning/retaining information, slowed reaction time, impaired motor coordination, impaired judgment and decision-making, an increased heart rate, and an altered mood. Long-term marijuana abuse can lead to dependence, poorer educational outcomes and job performance, respiratory problems, and cognitive impairment. For some people, it can also increase risk of psychosis (3).

*(Notes for Slide 14, continued)*

**Slide 14:** Commonly Used Psychoactive Substances

**Opioids** resemble natural chemicals that have binding sites on receptors. Opioids affect parts of the brain that control emotions, and create feelings of pleasure, relaxation, and contentment. They also act on the brainstem, which controls automatic body functions, and they affect the spinal cord as well. If swallowed as pills, opioids take longer to reach the brain. If they are injected, they act faster and can produce a quick, intense feeling of pleasure followed by a sense of well-being and a calm drowsiness. While prescription pain relievers can be highly beneficial if used as prescribed, opioids as a general class of drugs have a high potential for abuse (4).

Stimulants: **Cocaine** is a powerfully addictive stimulant drug that can be snorted or dissolved in water and then injected. **Crack** is the street name given to the form of cocaine that can be smoked. The term “crack” refers to the crackling sound produced by the rock as it is heated. Injecting or smoking cocaine produces a quicker, stronger high than snorting. Cocaine works by acting on the neurotransmitter dopamine, which is associated with pleasure and movement. Normally dopamine is released by a neuron in response to a pleasurable signal (e.g., the smell of good food), and then recycled back into the cell that released it. Cocaine works by preventing dopamine from being recycled, so the pleasurable feelings caused by dopamine become amplified. With repeated use, cocaine can cause long-term changes in brain, which may eventually lead to abuse or dependence (5).

**Methamphetamine** is a white, odorless, bitter-tasting crystalline powder that easily dissolves in water or alcohol and is taken orally, snorted, injected, or smoked. Methamphetamine increases the release of dopamine and blocks its re-uptake. Dopamine is involved in reward, motivation, the experience of pleasure, and motor function. Methamphetamine’s ability to release dopamine rapidly creates an intense euphoria, or “rush.” Chronic use leads to structural and functional changes in areas of the brain associated with emotion and memory, causing many emotional and cognitive problems for chronic users (6).

*(Notes for Slide 14, continued)*

**Slide 14:** Commonly Used Psychoactive Substances

**MDMA (Ecstasy)** is a synthetic, psychoactive drug that is chemically similar to the stimulant methamphetamine and the hallucinogen mescaline. The drug produces feelings of increased energy, euphoria, emotional warmth, and distortions in time, perception, and tactile experiences. MDMA is taken orally, usually as a capsule or tablet. MDMA gets its main effects by acting on neurons that use the neurotransmitter serotonin. The serotonin system plays an important role in regulating mood, aggression, sexual activity, sleep, and sensitivity to pain. MDMA binds to the serotonin transporter, thus increasing and prolonging the serotonin signal. MDMA has similar effects on another neurotransmitter—norepinephrine, which can cause increases in heart rate and blood pressure. MDMA also releases dopamine, but to a much lesser extent. The drug can produce confusion, depression, sleep problems, drug craving, and severe anxiety. MDMA can be harmful to the brain, causing long-lasting damage to neurons (7).

**GHB (Xyrem)** is a central nervous system (CNS) depressant. It has been approved for use in the treatment of narcolepsy. GHB acts on at least two sites in the brain: the GABA<sub>B</sub> receptor and a specific GHB binding site. At high doses, GHB's sedative effects may result in sleep, coma, or death (8). The subjective effects are described as very similar to alcohol, and the dosing range is very tight before negative effects (unconsciousness, vomiting) begin to occur.

**Ketamine** is a dissociative anesthetic that distorts perceptions of sight and sound, and can produce feelings of detachment. Ketamine acts on a type of glutamate receptor in the brain. Low-dose intoxication results in impaired attention, learning ability, and memory. At higher doses, ketamine can cause dreamlike states and hallucinations; and at very high doses still, ketamine can cause delirium and amnesia (8).

**Hallucinogens:** Compounds found in some plants and mushrooms (or their extracts) have hallucinogenic effects, causing profound distortions in perceptions of reality when consumed. Hallucinogens specifically work on certain serotonin receptor subtypes. Under the influence of hallucinogens, people see images, hear sounds, and feel sensations that seem real but are not. Some hallucinogens also produce rapid, intense emotional swings. While the exact mechanisms that make hallucinogens work are unclear, research shows that these drugs work, at least partially, by temporarily interfering with neurotransmitters and receptors. The most common hallucinogens are LSD, peyote, psilocybin, and PCP. PCP and DXM are also dissociative drugs (9).



*(Notes for Slide 14, continued)*

**Slide 14:** Commonly Used Psychoactive Substances



REFERENCES:

1. National Institutes of Health. (2012). *MedlinePlus: Alcohol*. Available at: <http://www.nlm.nih.gov/medlineplus/alcohol.html>.
2. National Institute on Alcohol Abuse and Alcoholism (NIAAA). (2010). *Beyond Hangovers: Understanding Alcohol's Impact on your Health*. Rockville, MD: U.S. Department of Health and Human Services, National Institutes of Health.
3. National Institute on Drug Abuse (NIDA). (2011). *NIDA Topics in Brief: Marijuana*. Rockville, MD: U.S. Department of Health and Human Services, National Institutes of Health.
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9. NIDA. (2009). *NIDA DrugFacts: Hallucinogens*. Rockville, MD: U.S. Department of Health and Human Services, National Institutes of Health.

**Synthetic Drugs**

- Not really “Spice,” “Bath Salts,” “Incense,” or “Plant Food”
- Chemically-based; not plant derived
- Complex chemistry
- Constantly changing to “stay legal”
- Need to prove “intended to use” to convict in some areas

**Slide 15: Synthetic Drugs**

Synthetic drugs are chemical creations that are made to cause the same changes in the user’s body as illegal drugs that are derived from plants (e.g., marijuana, cocaine). The use and abuse of synthetic drugs can produce serious health effects, including addiction, and in extreme cases, death. This slide summarizes the dilemma we are faced with because these drugs have many different “names” that are given to mask the fact they are chemical substances that have been created to produce some sort of a “high.” Although the chemical composition of some of them is known, the rogue chemists producing them are constantly changing the formulations so they can stay ahead of the latest federal and state legal definitions and laws to avoid prosecution.

Synthetic cannabinoids in herbal incense products were first detected in the United States in November 2008, by the Drug Enforcement Administration’s (DEA) forensic laboratory. These products were first encountered by U.S. Customs and Border Protection. Spice and Bath Salts are advertised as being “all natural,” safe to use, and legal but, in fact, they are none of those things. The packages often say “not for human consumption,” “for novelty use,” or “use as directed” (but without any directions for use on the package). The colorful and professional packaging and wording often changes as the laws are amended. In some jurisdictions, depending on how the laws are written, the prosecutor must prove the person intended to use the product (not just possess it), which makes it even more difficult to reduce availability of these substances.

**Why Do Young People Use Psychoactive Substances?**

**Why Start?**

- Experimentation
- Peer Pressure
- Medical

**Why Continue?**

- Relieve stress/pain
- Function better
- Have fun/relax
- Cope with mental health disorders

**Slide 16: Why Do Young People Use Psychoactive Substances?**

While there are many reasons for the initiation into and continued use of alcohol and drugs, key motivators pivot around the main factors included in the slide. People may start to experiment because of peer pressure, or for medical reasons—particularly as a way to alleviate physical pain. After initiation to alcohol/drug use, there are many reasons people continue to use these substances—they may be good ways to relieve stress or pain, or ways to help people function better in specific situations. For example, alcohol may help some people feel more at ease in social situations, while stimulant drugs like cocaine may help some people stay alert and focused while working. Also, because of their effects on neurotransmitters, these substances may help alleviate the symptoms of mental health disorders for some individuals. These motivators are not mutually exclusive. They may co-occur for many people.



### Slide 17: [No Title]

Drug addiction is considered a brain disease because drugs change the structure of the brain and how it works. As a result of scientific research, we also know that addiction is a disease that affects behavior. These brain changes can be long lasting, and can lead to the harmful behaviors seen in people who abuse drugs. We have identified many of the biological and environmental factors and are beginning to search for the genetic variations that contribute to the development and progression of the disease. Scientists use this knowledge to develop effective prevention and treatment approaches that reduce the toll drug abuse takes on individuals, families, and communities. Despite these advances, many people today do not understand why individuals become addicted to drugs or how drugs change the brain to foster compulsive drug abuse.

#### **Additional Information for the Trainer(s)**

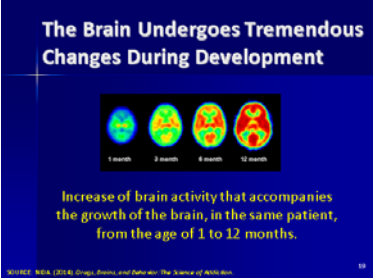
At first, people may perceive what seem to be positive effects with drug use. They also may believe that they can control their use; however, drugs can quickly take over their lives. Over time, if drug use continues, pleasurable activities become less pleasurable, and drug abuse becomes necessary for abusers to simply feel "normal." Drug abusers reach a point where they seek and take drugs, despite the tremendous problems caused for themselves and their loved ones. Some individuals may start to feel the need to take higher or more frequent doses, even in the early stages of their drug use.

The initial decision to take drugs is mostly voluntary. However, when drug abuse takes over, a person's ability to exert self-control can become seriously impaired. Brain imaging studies from drug-addicted individuals show physical changes in areas of the brain that are critical to judgment, decision making, learning and memory, and behavior control. Scientists believe that these changes alter the way the brain works, and may help explain the compulsive and destructive behaviors of addiction.



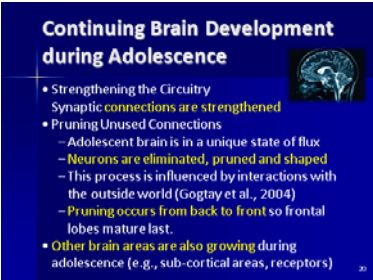
### Slide 18 [Transition Slide]: Why Focus on Youth?

Many social and developmental changes take place during adolescence and into young adulthood. Social and parental control lessens during this period, and young people become freer to choose behaviors (for example, drug use or heavy drinking) and lifestyles that are not constrained by others. Because some emerging adults will maintain or increase their problematic drug or alcohol use over time (rather than mature out of such use and related problems), it is important to intervene effectively before they develop long-lasting drug use patterns or disorders.



**Slide 19: The Brain Undergoes Tremendous Changes During Development**

It is common knowledge that the brain undergoes tremendous changes early in development. This slide shows increases in activity across the brain during the first year after birth. The more red exhibited, the more activity is seen in that area.



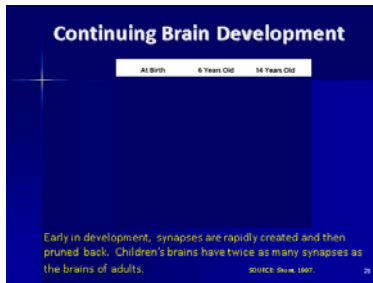
**Slide 20: Continuing Brain Development during Adolescence**

Substantial changes continue throughout adolescence and into young adulthood. Early in childhood, the brain produces an extremely large number of connections across the brain, many more than will be needed later in adulthood. During adolescence and young adulthood, the brain strengthens important connections. At the same time, it eliminates and shapes connections to increase efficiency. The pruning of neurons occurs from the back of the brain to the front of the brain, so that frontal lobes are the last to fully form.



REFERENCE:

Gogtay, N., et. al. (2004). Dynamic mapping of human cortical development during childhood through early adulthood. *Proceedings of the National Academy of Sciences*, 101, 8174-8179.



## Slide 21: Continuing Brain Development



### **\*\*ANIMATION\*\***

This drawing illustrates the pruning process.

#### ***Move forward to reveal first picture***

Between birth and 6 years of age...

#### ***Move forward to reveal second picture***

...there is a tremendous proliferation of neural connections.

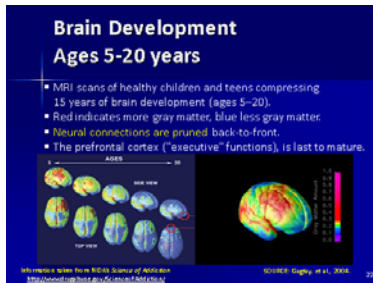
#### ***Move forward to reveal final picture***

This is followed by sustained thinning starting around puberty. Scientists think this process reflects greater organization of the brain as it prunes redundant connections, and increases in myelin, which enhance transmission of brain messages.



#### **REFERENCE:**

Shore, R. (1997). *Rethinking the Brain*. New York: Families and Work Institute.



## Slide 22: Brain Development Ages 5-20 years

Constructed from MRI scans of healthy children and teens, the time-lapse movie, from which the above images were extracted, compresses 15 years of brain development (ages 5–20) into just a few seconds. Red indicates more gray matter, blue less gray matter. Gray matter wanes in a back-to-front wave as the brain matures and neural connections are pruned. Areas performing more basic functions mature earlier; areas for higher order functions mature later. The prefrontal cortex, which handles reasoning and other "executive" functions, emerged late in evolution and is among the last to mature. Studies in twins are showing that development of such late-maturing areas is less influenced by heredity than areas that mature earlier.



### **\*\*ANIMATIONS\*\***

***This slide has complex animations and an embedded video, and the trainer should practice prior to training. A step-by-step guide is provided below.***

***The first bullet comes in automatically at the beginning of the slide. Provide the following description:***

This slide demonstrates the neural pruning through animations. This is a series of MRI scans from healthy children showing brain development as they age from 5 to 20 years.

***Move forward to reveal the next bullet, and present the information:***

Red indicates more gray matter and blue indicates less gray matter.

***Move forward and a small brain image will briefly appear on the lower right and then a short movie will automatically play full screen showing brain maturation. Once it stops, the small image of the brain will appear again on the lower right of the slide. Move forward to reveal the next bullet:***

As you can see, the pruning occurs from the back of the brain toward the front.

***Move forward to reveal the last bullet:***

This means that the prefrontal cortex (responsible for executive functioning, like decision-making) is the last to mature.

***Point out that the animation is replaying so that people can see it again. A static image of the progression will appear on the lower left as well. When people have had time to observe, move forward to next slide.***

*(Notes for Slide 22, continued)*

**Slide 22: Brain Development Ages 5-20 years**

***\*\*How to Insert the Video: This slide will contain a short video clip that will play after the trainer clicks ahead to the third bullet. In order for this to work, the video needs to be inserted into the presentation. You can access the video from the package of training materials that is posted to the PSATTC Products and Resources page ([www.psattc.org](http://www.psattc.org)). From the INSERT menu in PowerPoint, select "video (or movie)." Select the "PR Brain Maturing" video file. When prompted, indicate that the movie should play automatically and full screen. Once the video is inserted into the PowerPoint presentation, you need to maintain a direct connection between the PowerPoint presentation and the video file. When moving the PowerPoint file to another location on your computer or to another computer, make sure to always move the "PR Brain Maturing" video file along with it. If the link becomes broken, the video will need to be reinserted.***

***To play the video, hover over the video image to make the video controls appear. Click on the play button. The video should display full screen.***



**REFERENCES:**

NIDA. (2007). Drugs Brains, and Behavior: *The Science of Addiction* (NIH Pub No. 07-5605). Downloaded from <http://www.drugabuse.gov/ScienceofAddiction>.


Gogtay, N., et. al. (2004). Dynamic mapping of human cortical development during childhood through early adulthood. *Proceedings of the National Academy of Sciences*, 101, 8174-8179.

**The Interaction between the Developing Nervous System and Substances of Abuse Leads to:**

- Difficulty in decision making
- Difficulty understanding the consequences of behavior
- Increased vulnerability to memory and attention problems

**This can lead to:**

- Increased experimentation
- Alcohol and drug addiction



**Slide 23: The Interaction between the Developing Nervous System and Substance of Abuse Leads to:**

In reality, the exact impact of substance use on the developing brain is not known. However, when we look at the impact on the adult brain and understand normal development, several things seem true about this interaction, including that it may lead to difficulties in decision making and understanding the consequences of behavior (Fiellin, 2008). Additionally, it may increase the risk of memory and attention problems. These impairments, in turn, may lead to increased experimentation across a variety of behaviors; and increase the risk of addiction to a variety of substances (Fiellin, 2008).



REFERENCE:

Fiellin, D.A. (2008). Treatment of adolescent opioid dependence: No quick fix. *Journal of the American Medical Association, 300*(17), 2057-2059.

**Young Brains are Different from Older Brains**

- Alcohol and drugs affect the brains of adolescents and young adults differently than they do adult brains
  - Adolescent rats are **more sensitive to the memory and learning problems** than adults
  - Conversely, they are **less susceptible to intoxication** (motor impairment and sedation) from alcohol
- These factors may lead to higher rates of dependence in these groups

**Slide 24: Young Brains are Different from Older Brains**

The brain continues to develop into adulthood and undergoes dramatic changes during adolescence. This means that young brains are different from older brains. One example of this difference is evidenced by the fact that adolescent rats are: more susceptible to the effects of alcohol on memory and learning, but less susceptible to the motor and sedative effects.

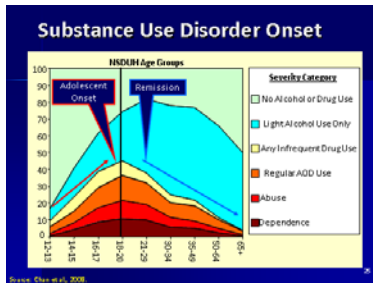
These factors may combine to increase the vulnerability to substance dependence in adolescents and young adults.



REFERENCE:

Hiller-Sturmhofel, S., & Swartzwelder, H.S. (2004/2005). Alcohol's effects on the adolescent brain: What can be learned from animal models. *Alcohol Research & Health, 28*(4), 213-221.





**Slide 25: Substance Use Disorder Onset**

This figure shows how substance use disorders typically begin during adolescence and young adulthood (in other words, of those individuals who went on to develop a substance use disorder, what age were they at onset of substance use). The red arrow indicates a rapid increase (onset) in younger years (under age 20); the blue arrow indicates a gradual decline (remission) during adult years. In fact, 90% of all adults with diagnosable dependence started using alcohol and/or drugs under the age of 18; half (50%) started using under the age of 15. Screening, assessment, and evaluation (through data collection and monitoring, at minimum) is a key way to inform clinicians how to intervene and address substance-related problem as early as possible. If an individual reaches adulthood without developing substance dependence, he/she is less likely to develop substance dependence in adulthood.



**REFERENCE:**

Chan, Y.F., Dennis, M.L., & Funk, R.R. (2008). Prevalence and comorbidity of major internalizing and externalizing problems among adolescents and adults presenting to substance abuse treatment. *Journal of Substance Abuse Treatment, 34*(1), 14-24.

**Slide 26: Where have we been?**

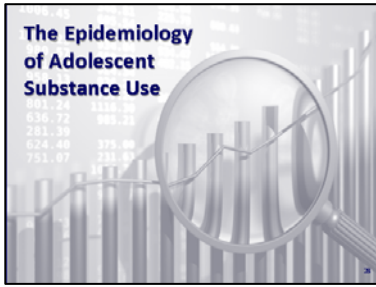
Applying adult treatment models to adolescents is not an effective way to adapt services that are age appropriate. A great need exists to develop intervention strategies that are age-specific and address the developmental processes that occur during adolescence. Over the past decade, the substance use disorder treatment field has garnered a lot of attention, and research has grown significantly, but there is a lot more work to be done.

Feature	1930-1997	1997-2013
Treatment Studies	16	500+
Random/Quasi	9	48+
Tx Manuals	0	50+
QA/Adherence	Rare	Common Practice
Epidemiology Studies	Slow	Common Tracking
Evaluations	Descriptive/Simple	More Advanced
Economic	Some Cost	Cost, CEA, BCA

*Growth has helped shape service improvement efforts*

**Slide 27: An Expansion of Adolescent Substance Use Disorder Research**

We have seen an explosion since the late 1990s in various adolescent substance use disorder research areas, such as epidemiology, clinical/intervention model development, and outcomes/evaluation. This has helped to shape treatment prevention and service improvement agendas. This table highlights the recent growth, as evidenced by the far right column (1997-2013), as compared to historical data (1930-1997).



**Slide 28: The Epidemiology of Adolescent Substance Use**

Adolescents and young adults have increased vulnerability to, and the potential for increased problems from substance use. The next series of slides will look specifically at prevalence of alcohol and drugs in this population.



**Slide 29: Every Generation of Teens Looks for New Ways to Get "High"**

Every generation of youth looks for new ways to get high. In this next section, we'll explore what this phenomenon is all about, and what clinicians can do to address substance use among adolescents and young adults.

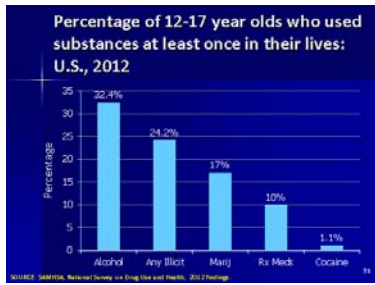
**Common Trends**

- Mainstay Substances**
  - Tobacco
  - Alcohol
  - Marijuana
- Hot Issues at the National Front**
  - Switching from Rx opioids to heroin
  - Inhalant use
  - Synthetic/dub drug use (Molly, Spice, K2)
- Where are Adolescents at with Harder Drugs?**
  - Meth, cocaine, heroin

Access & Availability

**Slide 30: Common Trends**

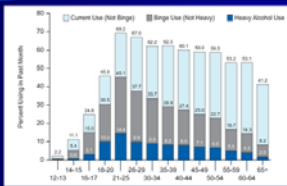
We have witnessed evolving attitudes among adolescents and young adults towards the use of prescription opioids and heroin. The public is still coming to terms with the fact that while prescription opioids are extremely helpful in managing pain, the reality is that they can also be dangerous when used improperly. Several issues are at the forefront of national drug trends, namely the switch among young opioid users from prescription opioids to heroin; inhalant use; and synthetic and club drug use. Relatively speaking, rates of methamphetamine, cocaine, and heroin are low among adolescents (as compared to rates of tobacco, alcohol, and marijuana use). Access and availability of alcohol and drugs plays a significant role in the drug trends seen among young drug users.



**Slide 31: Percentage of 12-17 year olds who used substances at least once in their lives: U.S., 2012**

It is not normative for youth to experiment with drugs and alcohol during adolescence, as is evidenced by this prevalence data from the National Survey on Drug Use and Health. In 2012, youth aged 12-17 were most likely to report lifetime use of alcohol (32.4%), followed by any illicit drug (24.2%). Lifetime use of marijuana was highest (17.0%), followed by non-medical use of prescription medications (psychotherapeutics; 10.0%) and cocaine (1.1%).

**Current, Binge, and Heavy Alcohol Use among Persons aged 12 and older: U.S., 2012**



**Slide 32: Current, Binge, and Heavy Alcohol Use among Persons aged 12 and older: U.S., 2012**

Slightly more than half (52.1%) of Americans aged 12 or older reported being current drinkers of alcohol in the 2012 survey, which was similar to the rate in 2011 (51.8%). This translates to an estimated 135.5 million current drinkers in 2012. Nearly one quarter (23.0%) of persons aged 12 or older in 2012 were binge alcohol users in the 30 days prior to the survey. This translates to about 59.7 million people. The rate in 2012 was similar to the rate in 2011 (22.6%). Looking specifically at the adolescent age group (12-17), 3.2 million 12 to 17 year olds were current alcohol users in 2012 (12.9%).

**Additional Information for the Trainer(s)**

In 2012, an estimated 56.5% of males aged 12 or older were current drinkers, which was higher than the rate for females (47.9%). However, among youths aged 12 to 17, females were more likely than males to report current alcohol use (see next slide). In 2012, rates of current alcohol use were 2.2% among persons aged 12 or 13, 11.1% of persons aged 14 or 15, 24.8% of 16 or 17 year olds, 45.8% of those aged 18 to 20, and 69.2% of 21 to 25 year olds. These estimates were similar to the rates reported in 2011.

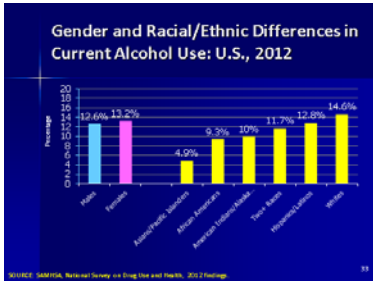
In 2012, heavy drinking was reported by 6.5% of the population aged 12 or older, or 17.0 million people. This percentage was similar to the rate of heavy drinking in 2011 (6.2%).

Rates of binge alcohol use in 2012 were 0.9% among 12 or 13 year olds, 5.4% among 14 or 15 year olds, 15.0% among 16 or 17 year olds, 30.5% among persons aged 18 to 20, and peaked at 45.1% among those aged 21 to 25. These rates were similar to those in 2011 (1.1%, 5.7%, 15.0%, 31.2%, and 45.4%, respectively). The rate of binge drinking in 2012 was 39.5% for young adults aged 18 to 25. Heavy alcohol use was reported by 12.7% of persons aged 18 to 25. These rates were similar to the rates in 2011 (39.8% and 12.1%, respectively).

**NSDUH DEFINITIONS**

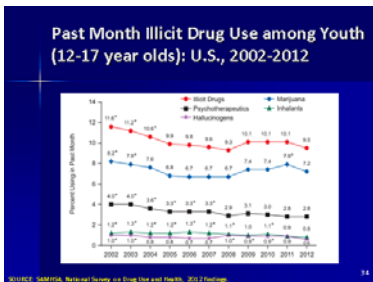
Binge alcohol use = Five (5) or more drinks on the same occasion (at the same time or within a couple of hours of each other) on at least one day in the past 30 days.

Heavy alcohol use = Binge drinking on five or more days in the past 30.



**Slide 33: Gender and Racial/Ethnic Differences in Current Alcohol Use – U.S., 2012**

Among youth aged 12 to 17, females were slightly more likely to self-report current drinking than their male counterparts (13.2% vs. 12.6%). With regards to racial/ethnic differences, Asians/Pacific Islanders had lower rates of current alcohol use than any other racial/ethnic group (4.9%). Rates of current alcohol use for youth in other racial/ethnic groups were 9.3% for African Americans, 10.0% for American Indians or Alaska Natives, 11.7% for those reporting two or more races, 12.8% for Hispanics/Latinos, and 14.6% for Whites.



**Slide 34: Past-Month Illicit Drug Use among Youth (12-17 year olds) – U.S., 2002-2012**



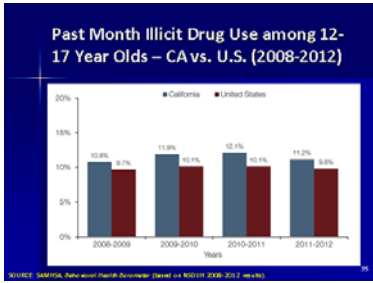
**\*\*ANIMATION\*\***

This slide includes two graphs, which have been animated so that the second graph appears 20 seconds after the first graph. If you need more time to describe the first graph, you can go into the animation pane and increase the delay to greater than 20 seconds.

**First Graph:** In 2012, 7.2% of youth aged 12 to 17 were current users of marijuana, 2.8% were current nonmedical users of psychotherapeutic drugs, 0.8% were current users of inhalants, 0.6% were current users of hallucinogens, and 0.1% were current users of cocaine.

**Second Graph:** Among youth aged 12 to 17, the specific types of illicit drugs used in the past month varied by age in 2012. Among 12 or 13 year olds, 1.7% used **psychotherapeutic drugs** non-medically (with 1.5% using pain relievers non-medically), 1.2% used marijuana, and 0.9% used inhalants. Among 14 or 15 year olds, 6.1% used **marijuana**, 2.5% used psychotherapeutic drugs non-medically (with 2.2% using pain relievers non-medically), 0.7% used inhalants, and 0.5% used hallucinogens. Among 16 or 17 year olds, 14.0% used **marijuana**, 4.0% used psychotherapeutic drugs non-medically (with 3.1% using pain relievers non-medically), 1.2% used hallucinogens, 0.7% used inhalants, and 0.2% used cocaine. The percentage of youths aged 16 or 17 in 2012 who were current users of cocaine was lower than in 2011 (0.5%).

In summary, 12-13 year olds were most likely to use prescription medications non-medically; and 14-15 and 16-17 year olds were most likely to report current marijuana use.

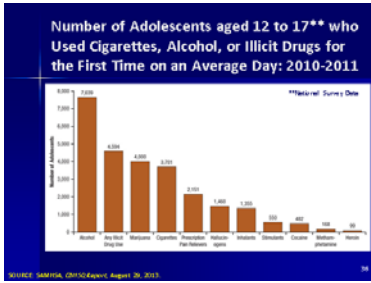


**Slide 35: Past Month Illicit Drug Use among 12-17 Year Olds – CA vs. U.S. (2008-2012)**

In California, about 353,000 youth (11.2% of all youth) in 2011-2012 reported using illicit drugs within the month prior to being surveyed. California’s rate of illicit drug use among youth was higher than the national rate in 2011-12.

**Additional Information for the Trainer(s)**

Among 12-17 year-olds in California, the mean age of first use of a variety of substances was as follows: 13.8 for marijuana, 13.4 years for the nonmedical use of psychotherapeutics, 13.2 years for cigarettes, and 13.4 years for alcohol.



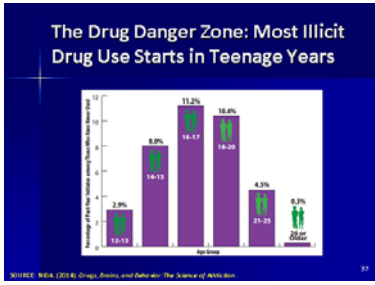
**Slide 36: Number of Adolescents aged 12 to 17\*\* who Used Cigarettes, Alcohol, or Illicit Drugs for the First Time on an Average Day – 2010-2011**

The Center for Behavioral Health Statistics and Quality (CBHSQ) in the Substance Abuse and Mental Health Services Administration (SAMHSA) collects, analyzes, and disseminates critical public health data. CBHSQ manages four national data collections that offer insight into adolescent substance use and treatment: the National Survey on Drug Use and Health (NSDUH), the Treatment Episode Data Set (TEDS), the National Survey of Substance Abuse Treatment Services (N-SSATS), and the Drug Abuse Warning Network (DAWN). The August 29, 2013 *CBHSQ Report* presents facts about adolescent substance use, including initiation, receipt of treatment, and emergency department visits for substance use "on an average or typical day." Data in this report from NSDUH, TEDS, and DAWN are for adolescents aged 12 to 17; data from N-SSATS are for youths aged 17 or younger.

In the United States in 2011, there were an estimated 25.1 million adolescents aged 12 to 17. In the past year, more than one quarter of adolescents drank alcohol, approximately one-fifth used an illicit drug, and almost one-eighth smoked cigarettes. According to combined 2010 and 2011 NSDUH data, 10.3% of adolescents aged 12 to 17 drank alcohol **for the first time** in the past year, and 6.3% used an illicit drug for the first time. The combined 2010 and 2011 NSDUH data indicate that, on any given day (average day) during the past year, the following numbers of adolescents used the indicated using a substance for the first time: 7,639 used alcohol, 4,594 used any illicit drug, 4,000 used marijuana, 3,701 used cigarettes, 2,151 used prescription pain relievers, 1,460 used a hallucinogen, 1,355 used an inhalant, 550 used stimulants, 482 used cocaine, 168 used methamphetamine, and 99 used heroin.

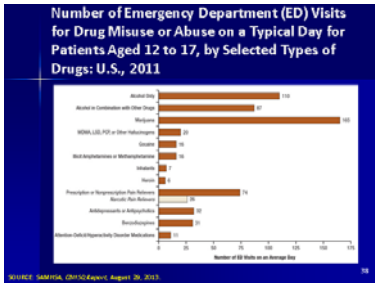
**Additional Information for the Trainer(s)**

With regards to past year use, according to combined 2010 and 2011 NSDUH data, nearly 7 million adolescents aged 12 to 17 drank alcohol, nearly 5 million used an illicit drug, and 3 million smoked cigarettes. The figure includes the past year numbers for specific substances. The combined 2010 and 2011 NSDUH data indicate that adolescents who used alcohol in the past month drank an average of 4.3 drinks per day on the days they drank, and adolescents who smoked cigarettes in the past month smoked an average of 3.9 cigarettes per day on the days they smoked.



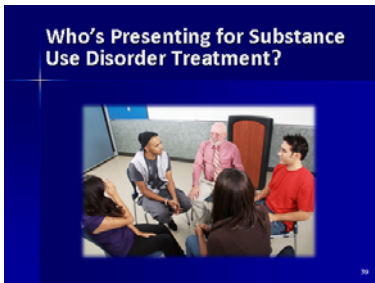
**Slide 37: The Drug Danger Zone – Most Illicit Drug Use Starts in Teenage Years**

According to data from the 2011 and 2012 NSDUH, most illicit drug use starts in the teenage years, with use starting as young as 12-13 years of age (or younger).



**Slide 38: Number of Emergency Department (ED) Visits for Drug Misuse or Abuse on a Typical Day for Patients Aged 12 to 17, but Selected Types of Drugs – U.S., 2011**

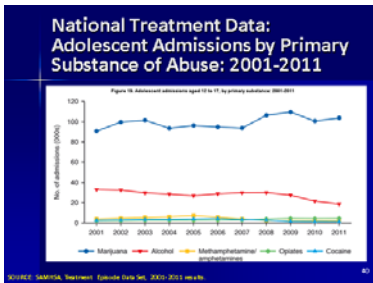
The Drug Abuse Warning Network (DAWN) estimates that in 2011 there were about 280,000 drug-related ED visits by adolescents aged 12 to 17, of which 181,005 visits involved the use of illicit drugs, alcohol, or intentional misuse or abuse of pharmaceuticals (e.g., prescription medicines, over-the-counter remedies, and dietary supplements). On a typical day in 2011, there were 777 drug-related ED visits for adolescents aged 12 to 17, of which 496 involved the use of illegal drugs or the misuse or abuse of pharmaceuticals. On a typical day in 2011, the listed substances were involved at the following levels. DAWN estimates that, on any given day in 2011, there were 63 ED visits for drug-related suicide attempts among adolescents.



**Slide 39: Who's Presenting for Substance Use Disorder Treatment?**

The next series of slides will look specifically at substance use disorder treatment admission rates among adolescents and young adults.





**Slide 40: National Treatment Data: Adolescent Admissions by Primary Substance of Abuse – 2001-2011**

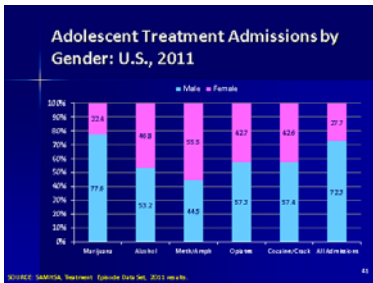
The Treatment Episode Data Set (TEDS) reported that in 2010, there were 132,850 admissions for adolescents aged 12 to 17 to substance use disorder treatment programs. Two primary substances—marijuana and alcohol—accounted for between 83% and 89% of adolescent admissions from 2001 to 2011.

**Marijuana** admissions increased from 62 percent of adolescent admissions in 2001 to 75 percent in 2011. The number of adolescent marijuana admissions increased by 14 percent between 2001 and 2011. **Alcohol** admissions declined from 23 percent of adolescent admissions in 2001 to 14 percent in 2011.

**Methamphetamine/amphetamine** admissions increased from 3 percent in 2001 to 6 percent in 2005, but then decreased to 2 percent in 2011. **Opiate** admissions represented 1 to 2 percent of adolescent admissions from 2001 to 2008 but rose to 3 percent in 2009 where it remained in 2011. **Opiates other than heroin** represented 29 percent of adolescent opiate admissions in 2001 but rose to 66 percent in 2011. **Cocaine** accounted for between 2 and 3 percent of adolescent admissions between 2001 and 2008. Beginning in 2009, cocaine accounted for 1 percent of adolescent admissions. **All other substances combined** accounted for 2 to 3 percent of adolescent admissions between 2001 and 2011.

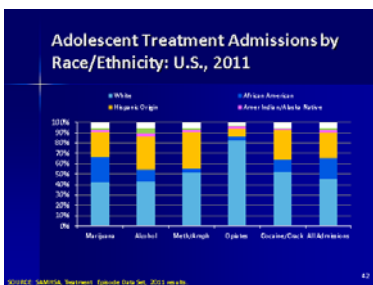
**Additional Information for the Trainer(s)**

TEDS indicates that, on a typical day in 2010, adolescent admissions to treatment reported the following primary substances of abuse: 266 reported marijuana; 58 reported alcohol; 12 reported heroin or other opiates; 10 reported stimulants; 3 reported cocaine; and 8 reported other drugs. In addition, substance use disorder treatment admissions were referred principally by the following sources: 163 by the criminal justice system; 62 by self-referral or referral from other individuals; 49 by schools; 44 by community organizations; 23 by alcohol/drug abuse care providers; and 17 by other health care providers. Lastly, N-SSATS, which collects information on substance use disorder treatment at both publicly and privately funded facilities, reports how many active clients aged 17 or younger received the following types of substance use disorder treatment on a typical day in 2010: 71,303 were clients in outpatient treatment; 9,302 were clients in non-hospital residential treatment; and 1,258 were clients in hospital inpatient treatment.



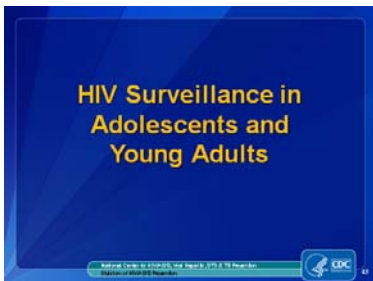
**Slide 41: Adolescent Treatment Admissions by Gender: U.S., 2011**

According to the 2010 data from TEDS, a higher percentage of males were admitted to treatment for abuse of all substances, with the exception of methamphetamine/ amphetamine admissions, which were dominated by females (55.5% female vs. 44.5% male).



**Slide 42: Adolescent Treatment Admissions by Race/Ethnicity: U.S., 2011**

In 2012, the racial/ethnic breakdown of the general U.S. population was as follows: Whites (60.3%); Hispanics/Latinos (16.9%); African Americans (13.1%); Asians/Pacific Islanders (5.3%); and American Indian/Alaska Native (1.2%). According to the 2010 TEDS treatment admissions data, African Americans and Hispanics/Latinos were over-represented among all substance use disorder treatment admissions. The racial/ethnic breakdown for alcohol and the main drugs of abuse are highlighted in the figure.



**Slide 43: HIV Surveillance in Adolescents and Young Adults**

Estimated numbers and rates of diagnosed HIV infection and diagnosed infections classified as stage 3 (AIDS) are based on data from 50 states, the District of Columbia, and 6 U.S. dependent areas. Rates are not calculated by race/ethnicity for the 6 U.S. dependent areas because the U.S. Census Bureau does not collect information from all U.S. dependent areas.

Unlike adults, the rate of HIV infection among adolescents is spread fairly evenly across the U.S.

- A. Strongly disagree
- B. Disagree
- C. Neutral
- D. Agree
- E. Strongly Agree

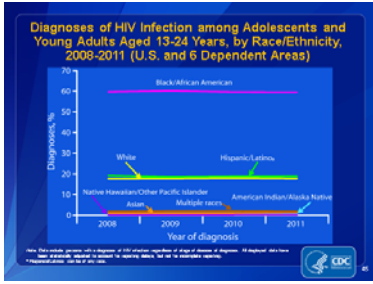
**Slide 44: What do you think?**



*Read the question and choices, and review audience responses out loud.*



\*\*Audience Response System (ARS)-compatible slide



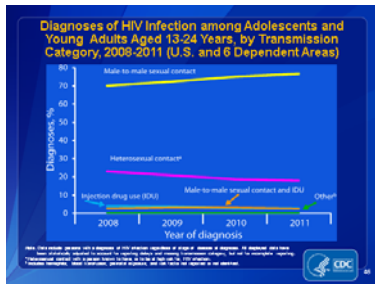
**Slide 45: Diagnoses of HIV Infection among Adolescents and Young Adults Aged 13-24 Years by Race/Ethnicity, 2008-2011 (U.S. and 6 Dependent Areas)**

During 2008 through 2011, blacks/African Americans accounted for more than 55% of diagnoses of HIV infection each year among adolescents and young adults aged 13 to 24 years in the United States and 6 dependent areas. In 2011, of persons aged 13 to 24 years diagnosed with HIV infection, 60% were black/African American, 18% were white, 19% were Hispanic/Latino, 2% were persons of multiple races, 1% each were Asian and American Indian/Alaska Native, and less than 1% were Native Hawaiian/other Pacific Islander.

The racial/ethnic distribution of diagnoses of HIV infection in persons aged 13 to 24 years differs substantially from the distribution of diagnoses among all adults and adolescents (aged 13 and over) in 2010. Among all adults and adolescents diagnosed with HIV infection in 2009, 45% were black/African American, 29% were white, 22% were Hispanic/Latino, 2% were Asian, 1% were of multiple races, and less than 1% each were American Indian/Alaska Native and Native Hawaiian/other Pacific Islander.

Data include persons with a diagnosis of HIV infection regardless of stage of disease at diagnosis. All displayed data are estimates. Estimated numbers resulted from statistical adjustment that accounted for reporting delays, but not for incomplete reporting.

Hispanics/Latinos can be of any race.



**Slide 46: Diagnoses of HIV Infection among Adolescents and Young Adults Aged 13-24 Years, by Transmission Category, 2008-2011 (U.S. and 6 Dependent Areas)**

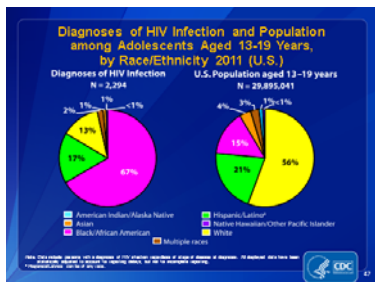
This slide presents the percentage distribution of diagnoses of HIV infection by transmission category for adolescents and young adults 13 to 24 years of age diagnosed from 2008 through 2011 in the United States and 6 dependent areas.

Among adolescents and young adults, the estimated percentage of diagnosed HIV infections attributed to male-to-male sexual contact increased from 70% in 2008 to 77% in 2011. The percentage of diagnosed HIV infections attributed to heterosexual contact decreased from 23% to 18% during this time. The percentage of diagnosed HIV infections attributed to injection drug use also decreased slightly, from 4% to 3%. The percentage of diagnosed HIV infections attributed to male-to-male sexual contact and injection drug use remained relatively stable from 2008 through 2011.

The remaining diagnoses of HIV infection were those attributed to hemophilia, blood transfusion, perinatal exposure, and those in persons without an identified risk factor.

Data include persons with a diagnosis of HIV infection regardless of stage of disease at diagnosis. All displayed data are estimates. Estimated numbers resulted from statistical adjustment that accounted for reporting delays and missing transmission category, but not for incomplete reporting.

Heterosexual contact is with a person known to have, or to be at high risk for, HIV infection.

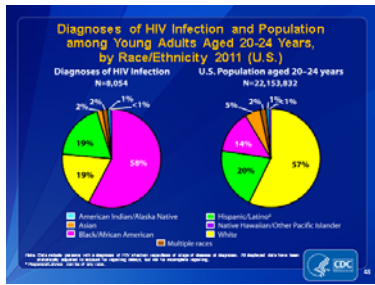


**Slide 47: Diagnoses of HIV Infection and Population among Adolescents Aged 13-19 Years, by Race/Ethnicity, 2011 (U.S.)**

Black/African American adolescents aged 13 to 19 years have been disproportionately affected by HIV. In 2011, in the United States, 15% of adolescents were black/African American, yet an estimated 67% of diagnoses of HIV infection in 13 to 19 year olds were in black/African American adolescents.

Data include persons with a diagnosis of HIV infection regardless of stage of disease at diagnosis. All displayed data are estimates. Estimated numbers resulted from statistical adjustment that accounted for reporting delays, but not for incomplete reporting.

Hispanics/Latinos can be of any race.

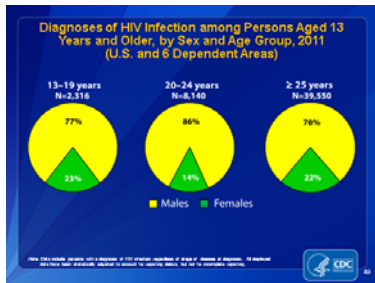


**Slide 48: Diagnoses of HIV Infection and Population among Young Adults Aged 20-24 Years, by Race/Ethnicity, 2011 (U.S.)**

Black/African American young adults aged 20 to 24 years have been disproportionately affected by HIV. In 2011, in the United States, 14% of young adults were black/African American, yet an estimated 58% of diagnoses of HIV infection in 20 to 24 year olds were in blacks/African Americans.

Data include persons with a diagnosis of HIV infection regardless of stage of disease at diagnosis. All displayed data are estimates. Estimated numbers resulted from statistical adjustment that accounted for reporting delays, but not for incomplete reporting.

Hispanics/Latinos can be of any race.



**Slide 49: Diagnoses of HIV Infection among Persons Aged 13 Years and Older, by Sex and Age Group, 2011 (U.S. and 6 Dependent Areas)**

In 2011, the percentage distribution of diagnoses of HIV infection by sex varied with age group at diagnosis in the United States and 6 dependent areas. In 2011, females accounted for an estimated 14% of young adults aged 20 to 24 years diagnosed with HIV infection, compared with 23% of adolescents aged 13 to 19 years and 22% of adults aged 25 years and older.

Data include persons with a diagnosis of HIV infection regardless of stage of disease at diagnosis. All displayed data are estimates. Estimated numbers resulted from statistical adjustment that accounted for reporting delays, but not for incomplete reporting. Age group assigned based on age at diagnosis.

**Diagnoses of HIV Infection among Adolescent and Young Adult Males, by Age Group and Transmission Category 2011 (U.S. and 6 Dependent Areas)**

Transmission category	13-19 years		20-24 years	
	No.	%	No.	%
Male-to-male sexual contact	1,664	92.0	6,354	90.0
Injection drug use (IDU)	23	1.4	117	1.7
Male-to-male sexual contact and IDU	37	2.1	232	3.3
Heterosexual contact <sup>a</sup>	67	3.7	294	4.2
Other <sup>b</sup>	0	0.0	0	0.0
<b>Total</b>	<b>1,794</b>	<b>100</b>	<b>6,998</b>	<b>100</b>

Note: Data exclude persons with a diagnosis of HIV infection reported at ages of 10 years or younger. All percentages were based on the total number of persons with a diagnosis of HIV infection reported at ages of 13 years or older. Percentages may not sum to 100% due to rounding. CDC

**Slide 50: Diagnoses of HIV Infection among Adolescent and Young Adult Males, by Age Group and Transmission Category, 2011 (U.S. and 6 Dependent Areas)**

This slide shows the estimated numbers and percentages of diagnoses of HIV infection among adolescent males aged 13 to 19 years and young adult males aged 20 to 24 years in 2011 in the United States and 6 dependent areas. In 2011, in both age groups, the majority of diagnosed HIV infections were attributed to male-to-male sexual contact: 93% of diagnoses in males aged 13 to 19 years, and 91% of diagnoses in males aged 20 to 24 years.

Data include persons with a diagnosis of HIV infection regardless of stage of disease at diagnosis. All displayed data are estimates. Estimated numbers resulted from statistical adjustment that accounted for reporting delays and missing transmission category, but not for incomplete reporting.

Heterosexual contact is with a person known to have, or to be at high risk for, HIV infection.

**Diagnoses of HIV Infection among Adolescent and Young Adult Females, by Age Group and Transmission Category 2011 (U.S. and 6 Dependent Areas)**

Transmission category	13-19 years		20-24 years	
	No.	%	No.	%
Injection drug use	37	7.0	101	0.0
Heterosexual contact <sup>a</sup>	485	92.7	1,041	91.2
Other <sup>b</sup>	0	0.0	0	0.0
<b>Total</b>	<b>523</b>	<b>100</b>	<b>1,142</b>	<b>100</b>

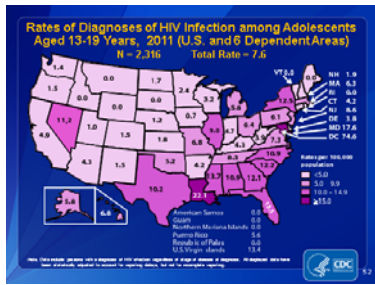
Note: Data exclude persons with a diagnosis of HIV infection reported at ages of 10 years or younger. All percentages were based on the total number of persons with a diagnosis of HIV infection reported at ages of 13 years or older. Percentages may not sum to 100% due to rounding. CDC

**Slide 51: Diagnoses of HIV Infection among Adolescent and Young Adult Females, by Age Group and Transmission Category, 2011 (U.S. and 6 Dependent Areas)**

This slide shows the estimated numbers and percentages of diagnoses of HIV infection among adolescent females aged 13 to 19 years and young adult females aged 20 to 24 years in 2011 in the United States and 6 dependent areas. In 2011, in both age groups, the majority of diagnosed HIV infections were attributed to heterosexual contact: 93% in females aged 13 to 19 years, and 91% in females aged 20 to 24 years.

Data include persons with a diagnosis of HIV infection regardless of stage of disease at diagnosis. All displayed data are estimates. Estimated numbers resulted from statistical adjustment that accounted for reporting delays and missing transmission category, but not for incomplete reporting.

Heterosexual contact is with a person known to have, or to be at high risk for, HIV infection.



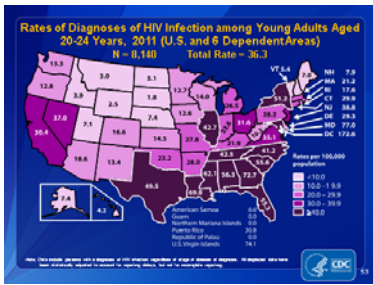
**Slide 52: Rates of Diagnoses of HIV Infection among Adolescents Aged 13-19 Years, 2011 (U.S. and 6 Dependent Areas)**

In 2011, there were an estimated 2,316 adolescents aged 13 to 19 years diagnosed with HIV infection in the United States and 6 dependent areas. The estimated rate of diagnoses of HIV infection in adolescents was 7.6 per 100,000 population. The rates of diagnoses of HIV infection among adolescents aged 13 to 19 years in 2011 were highest in the District of Columbia (74.6 per 100,000), Louisiana (22.1 per 100,000), Maryland (17.6 per 100,000), Florida (13.5 per 100,000), and the U.S. Virgin Islands (13.4 per 100,000).

The District of Columbia (i.e., Washington, DC) is a city; please use caution when comparing the HIV diagnosis rate in DC with the rates in states.

Data include persons with a diagnosis of HIV infection regardless of stage of disease at diagnosis. All displayed data are estimates. Estimated numbers resulted from statistical adjustment that accounted for reporting delays, but not for incomplete reporting.





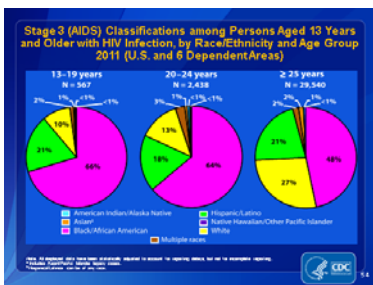
**Slide 53 Rates of Diagnoses of HIV Infection among Young Adults Aged 20-24 Years, 2011 (U.S. and 6 Dependent Areas)**

This slide compares the racial/ethnic percentage distributions of stage 3 (AIDS) classifications in adolescents 13-19 years of age, young adults 20-24 years of age, and adults 25 years and over diagnosed during 2011 in the United States and 6 dependent areas. In all three age groups, blacks/African Americans had the largest percentage of stage 3 (AIDS) classifications, although the percentage decreased as age group increased: 66% in persons aged 13 to 19 years, 64% in persons aged 20 to 24 years, and 48% in persons aged 25 years and over. While Hispanics/Latinos accounted for relatively similar percentages of stage 3 (AIDS) classifications in all three age groups, they represented the second largest percentage of persons 13-19 years (21%) and persons 20-24 years (18%) and the third largest percentage of persons among adults over 25 years of age (21%). The percentage of stage 3 (AIDS) classifications among whites in 2011 increased as age group increased: 10% in persons aged 13 to 19 years, 13% in persons aged 20 to 24 years, and 27% in persons aged 25 years and over.

All displayed data are estimates. Estimated numbers resulted from statistical adjustment that accounted for reporting delays, but not for incomplete reporting. Age group assigned based on age at stage 3 (AIDS) classification.

The Asian category includes Asian/Pacific Islander legacy cases (cases that were diagnosed and reported under the pre-1997 Office of Management and Budget race/ethnicity classification system).

Hispanics/Latinos can be of any race.

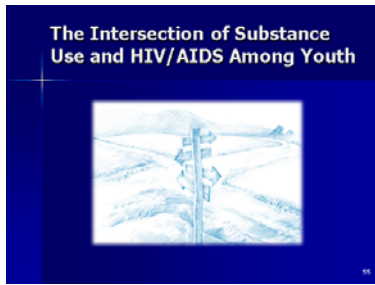


**Slide 54: Stage 3 (AIDS) Classifications among Persons Aged 13 Years and Older with HIV Infection, by Race/Ethnicity and Age Group, 2011 (U.S. and 6 Dependent Areas)**

The Asian category includes Asian/Pacific Islander legacy cases (cases that were diagnosed and reported under the pre-1997 Office of Management and Budget race/ethnicity classification system).

Hispanics/Latinos can be of any race.





**Slide 55 [Transition Slide]: The Intersection of Substance Use and HIV/AIDS Among Youth**

Young people are frequently at the center of the HIV epidemic, and HIV has been referred to as a “youth-driven disease” worldwide (1). Almost half of all new HIV infections worldwide are among youth aged 15–24 years (2). In the United States, 40% of all HIV infections occur in persons under 25 years of age, and HIV is the sixth leading cause of death among adolescents (1). In addition, adolescence and young adulthood is often the time when alcohol and drug experimentation begins, which may put young substance users at high-risk for HIV and other sexually transmitted infections. Substance use impairs judgment and decision-making, and some drugs (e.g., stimulants) may heighten perception of sexual arousal and promote high-risk sexual activity (3).

According to CDC estimates, in 2011, more than 10,000 young people, aged 13 to 24 were diagnosed with HIV, and over 2,900 were diagnosed with AIDS in the U.S. In the past, most of those cases were in adolescent males. That ratio is changing, as more females become infected.

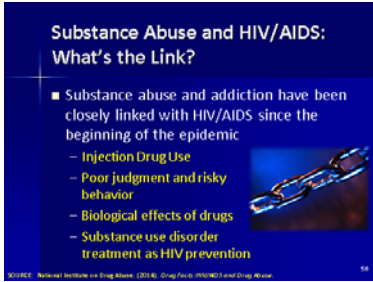


**REFERENCES:**

1. Benton T., & Ifeagwu J. (2008). HIV in adolescents: What we know and need to know. *Current Psychiatry Reports, 10*, 109-115.
2. UNAIDS. (2008). Report on the Global AIDS Epidemic. Geneva: UNAIDS.
3. Rotheram-Borus, M.J., Ingram, B.K., Swendeman, D., & Flannery, D. (2009). Common principles embedded in effective adolescent HIV prevention programs. *AIDS Behavior, 13*(3), 387-398.

**Substance Abuse and HIV/AIDS:  
What's the Link?**

- Substance abuse and addiction have been closely linked with HIV/AIDS since the beginning of the epidemic
  - Injection Drug Use
  - Poor judgment and risky behavior
  - Biological effects of drugs
  - Substance use disorder treatment as HIV prevention



NIDA/NIH, National Institute on Drug Abuse. (2014). Drug Facts: HIV/AIDS and Drug Abuse.

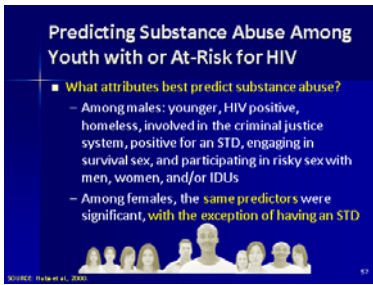
### Slide 56: Substance Abuse and HIV/AIDS: What's the Link?

Typically, people associate drug abuse and HIV/AIDS with injection drug use and needle sharing. Drug abuse by any method (not just injection) can put a person at risk for contracting HIV. Drug and alcohol intoxication affect the way a person makes decisions and can lead to unsafe sexual practices, which puts them at risk for getting HIV or transmitting it to someone else. Drug abuse and addiction can worsen the progression of HIV and its consequences, especially in the brain. Since the late 1980s, researchers have found that if you treat substance use disorders, you can prevent the spread of HIV. When people who have a substance problem enter treatment, they stop or reduce their alcohol and/or drug use and related risk behaviors, including drug injection and unsafe sexual practices. SUD treatment programs also serve an important role in getting out good information on HIV/AIDS and related diseases, providing counseling and testing services, and offering referrals for medical and social services.



#### REFERENCE:

National Institute on Drug Abuse. (2014). Drug Facts: HIV/AIDS and Drug Abuse. Available at: <http://teens.drugabuse.gov/drug-facts/hiv-aids-and-drug-abuse>.



### Slide 57: Predicting Substance Abuse Among Youth with or At-Risk for HIV

Substance abuse is a major issue for many young people who are living with, or are at high risk for HIV. Many factors, such as unprotected sexual behaviors and substance abuse, place an individual at increased risk for HIV infection, many of those same issues are part of a generalized constellation of problem behaviors that place a youth at risk for substance abuse. Huba and colleagues found that among HIV-positive and at-risk youth, several characteristics were predictive of substance abuse. Youth who were HIV positive, younger, Hispanic, or multiracial were more likely to have a substance abuse problem. Among the females, those who were Native American were also more likely to be substance abusers. In terms of other related risk behaviors, both males and females who were noted to have had risky sex with men, risky sex with women, sex with an injection drug user, survival sex, or those who were homeless or involved in the criminal justice system were more likely to also be substance abusers. Among the males, those with a history of an STD and having had an HIV-positive sex partner were also more likely to be substance abusers, as were females who were not involved with the mental health service system.

#### Additional Information for the Trainer(s)

In one study, Alperen and colleagues conducted a cross-sectional and longitudinal analysis to examine the risk factors associated with recent substance use among perinatally human immunodeficiency virus (HIV)-infected (PHIV+) and perinatally exposed, uninfected (PHEU) youth and compared SU lifetime prevalence with the general population of United States adolescents. Perinatal HIV infection was not a statistically significant risk factor for alcohol or marijuana use. Risk factors for alcohol use among PHIV+ youth included higher severity of emotional and conduct problems and alcohol and marijuana use in the home by the caregiver or others. Risk factors for marijuana use among PHIV+ youth included marijuana use in the home, higher severity of conduct problems, and stressful life events. Similar SU risk factors among PHEU youth included SU in the home and higher severity of conduct and emotional problems. Overall lifetime prevalence of SU by age was similar to that in national surveys. Although lifetime substance use prevalence and risk factors for PHIV+ and PHEU adolescents were similar to national norms, the negative consequences are potentially greater for PHIV+ youth. Prevention efforts should begin before substance use initiation and address the family and social environment and youth mental health status.

*(Notes for Slide 57, continued)*

**Slide 57: Predicting Substance Abuse among Youth with or At-Risk for HIV**



REFERENCES:

1. Huba et al. (2000). *Psychology of Addictive Behaviors*, 14(2), 197-205.
2. Alperen et al. (2012). *Fourth International Workshop on HIV Pediatrics*, Washington, DC, July 20–21, 2012.

Gender Differences in the Relationship between Traumatic Stress, Substance Use, and HIV Risk

- Significant differences between males and females, and between those reporting low versus acute traumatic stress (TS)
  - Females and those with acute levels of TS symptoms had higher levels of substance use, mental health, and physical health problems as well as greater HIV risk behaviors when compared to males and those with low levels of TS symptoms

Stevens et al., 2003

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**Slide 58: Gender Differences in the Relationship between Traumatic Stress, Substance Use, and HIV Risk**

Research on traumatic stress (TS) among adolescent substance users is limited, with research indicating that not all adolescents who experience trauma are substance users and not all adolescent substance users report symptoms of TS. In the general adolescent population, research on TS symptoms indicates gender differences, with more females reporting traumatic life events and more symptoms associated with traumatic stress. A gap in research exists, however, with regard to gender differences among adolescent substance users who report low versus acute levels of TS symptoms. In a study by Stevens and colleagues, 274 male and 104 female adolescents enrolled in four drug treatment programs in Arizona were assessed. Comparisons between males and females and those with low versus acute levels of TS symptoms were examined with regard to substance use, mental health, physical health, and HIV risk-taking behavior. Results indicate significant differences between males and females and between those reporting low versus acute TS. In general, females and those with acute levels of TS symptoms had higher levels of substance use, mental health, and physical health problems as well as greater HIV risk behaviors when compared to males and those with low levels of TS symptoms. Results of this study indicate the need to assess adolescents for TS, including victimization and maltreatment histories, when entering substance abuse treatment and the need to simultaneously address issues of substance use, TS, and related mental health, physical health, and HIV sex risk behavior while in treatment.




**REFERENCE:**

Stevens, S.J., Murphy, B.S., & McKnight, K. (2003). Traumatic stress and gender differences in relationship to substance abuse, mental health, physical health, and HIV risk behavior in a sample of adolescents enrolled in drug treatment. *Child Maltreatment, 8*(1), 46-57.

**HIV Risk Factors and Barriers to Prevention**

- Sexual Risk Factors
  - Early age at sexual initiation
  - Heterosexual transmission
  - MSM
  - Other STDs
- Substance Abuse
- Lack of Awareness
- Poverty and Out of School Youth
- Coming of Age of HIV Positive Children



SOURCE: CDC (2008). Getting the Facts About HIV and AIDS. 2008.

**Slide 59: HIV Risk Factors and Barriers to Prevention**

**Early age at sexual initiation:** According to CDC’s Youth Risk Behavioral Survey (YRBS), many young people begin having sexual intercourse at early ages: 47% of high school students have had sexual intercourse, and 7.4% of them reported first sexual intercourse before age 13 [4]. HIV/AIDS education needs to take place at correspondingly young ages, before young people engage in sexual behaviors that put them at risk for HIV infection.

**Heterosexual transmission:** Young women, especially those of minority races or ethnicities, are increasingly at risk for HIV infection through heterosexual contact. According to data from a CDC study of HIV prevalence among disadvantaged youth during the early to mid-1990s, the rate of HIV prevalence among young women aged 16–21 was 50% higher than the rate among young men in that age group [5]. African American women in this study were 7 times as likely as white women and 8 times as likely as Hispanic women to be HIV-positive. Young women are at risk for sexually transmitted HIV for several reasons, including biologic vulnerability, lack of recognition of their partners’ risk factors, inequality in relationships, and having sex with older men who are more likely to be infected with HIV.

**MSM:** Young MSM are at high risk for HIV infection, but their risk factors and the prevention barriers they face differ from those of persons who become infected through heterosexual contact. According to a CDC study of 5,589 MSM, 55% of young men (aged 15–22) did not let other people know they were sexually attracted to men [6]. MSM who do not disclose their sexual orientation are less likely to seek HIV testing, so if they become infected, they are less likely to know it. Further, because MSM who do not disclose their sexual orientation are likely to have 1 or more female sex partners, MSM who become infected may transmit the virus to women as well as to men. In a small study of African American MSM college students and nonstudents in North Carolina, the participants had sexual risk factors for HIV infection, and 20% had a female sex partner during the preceding 12 months [7].

**Sexually transmitted diseases (STDs):** The presence of an STD greatly increases a person’s likelihood of acquiring or transmitting HIV [8]. Some of the highest STD rates in the country are those among young people, especially young people of minority races and ethnicities [9].

**Substance Use:** Young people in the United States use alcohol, tobacco, and other drugs at high rates [10]. Both casual and chronic substance users are more likely to engage in high-risk behaviors, such as unprotected sex, when they are under the influence of drugs or alcohol [11]. Runaways and other homeless young people are at high risk for HIV infection if they are exchanging sex for drugs or money.

*(Notes for Slide 59, continued)*

### **Slide 59: HIV Risk Factors and Barriers to Prevention**

**Lack of Awareness:** Research has shown that a large proportion of young people are not concerned about becoming infected with HIV [12]. Adolescents need accurate, age-appropriate information about HIV infection and AIDS, including how to talk with their parents or other trusted adults about HIV and AIDS, how to reduce or eliminate risk factors, how to talk with a potential partner about risk factors, where to get tested for HIV, how to use a condom correctly. Information should also include the concept that abstinence is the only 100% effective way to avoid infection.

**Poverty and Out-of-School Youth:** Nearly 1 in 4 African Americans and 1 in 5 Hispanics live in poverty [13]. The socioeconomic problems associated with poverty, including lack of access to high-quality health care, can directly or indirectly increase the risk for HIV infection [14]. Young people who have dropped out of school are more likely to become sexually active at younger ages and to fail to use contraception [15].

**The Coming of Age of HIV-Positive Children:** Many young people who contracted HIV through perinatal transmission are facing decisions about becoming sexually active. They will require ongoing counseling and prevention education to ensure that they do not transmit HIV.



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1. CDC. (2005). *HIV/AIDS Surveillance Report, 2004*. Vol. 16. Atlanta: US Department of Health and Human Services.
2. CDC. (2005). *HIV Prevention in the Third Decade*. Atlanta: US Department of Health and Human Services.
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(Notes for Slide 59, continued)

## Slide 59: HIV Risk Factors and Barriers to Prevention



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6. CDC. (2003). HIV/STD risks in young men who have sex with men who do not disclose their sexual orientation—six US cities, 1994–2000. *MMWR*, 52, 81-85.
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15. Office of the Surgeon General. (2001). The Surgeon General's call to action to promote sexual health and responsible sexual behavior.



### Adolescent Substance Use and Sexual Risk-Taking Behavior

- Earlier age of onset to sexual activity
- More sexual partners
- Less consistent use of condoms
- Higher number of STDs
- Greater prevalence of HIV testing
- Higher number of pregnancies among substance-abusing females
- Substance involvement was associated with high-risk sexual behavior throughout the transition into young adulthood

© 2001 S. F. Tapert et al. JAH

### Slide 60: Adolescent Substance Use and Sexual Risk-Taking Behavior

A study by Tapert and colleagues validates the HIV risk factors listed on the previous slide. In this study, self-reported sexual behaviors and substance involvement questionnaires were given to a sample of youth in substance abuse treatment programs and were compared to a sample of sociodemographically similar community youth without histories of substance use disorders. The factors listed on the slide were reported by youth in the clinical treatment sample relative to sociodemographically comparable non-abusing community youth. Youth identified with substance problems were found to be more likely to engage in risky sexual behaviors during adolescence and to continue risky sexual behaviors to the extent that substance problems persist. Risk reduction education should be included with adolescent substance abuse treatment.



#### REFERENCE:

Tapert, S.F., Aarons, G.A., Sedlar, G.R., & Brown, S.A. (2001). Adolescent substance use and sexual risk-taking behavior. *Journal of Adolescent Health, 28*, 181-189.

### HIV Risk Behaviors Among Adolescent Substance Abusers

- 30 adolescents (12-18) assessed to explore HIV-risk behaviors and knowledge about HIV/AIDS
- The substance using group knew an equal amount about HIV/AIDS, but engaged in more risky sexual behaviors than the psychiatric group or control
- Impulsivity associated with substance use disorders may account for the difference

©1999 Deas-Nesmith et al., 1999

### Slide 61: HIV Risk Behaviors Among Adolescent Substance Abusers

In one study, a small sample of 30 adolescents aged 12-18 years from each group (substance use disorders, psychiatric disorders, and controls) were assessed to explore HIV-risk behaviors and knowledge about HIV/AIDS. Semi-structured instruments for psychiatric and substance use disorders were also administered. While there were no significant differences between groups in knowledge of HIV/AIDS, chi-square analysis of risk behaviors revealed significant differences between the substance use disorders group and the controls. The knowledge-behavior gap was greater for the substance users than all other groups, in that while they knew an equal amount about HIV/AIDS, they actually engaged in more risky sexual behaviors than the other two groups. It may be that the impulsivity associated with substance use disorders accounts for this difference. It is recommended that HIV/AIDS prevention education and impulse control strategies are included in the treatment of adolescents with substance use disorders.



#### REFERENCE:

Deas-Nesmith, D., Brady, K.T., White, R., & Campbell, S. (1999). HIV risk behaviors in adolescent substance abusers. *Journal of Substance Abuse Treatment, 16*(2), 169-172.

#### HIV Antiretroviral Adherence and Intervention Studies Among HIV-Infected Youth

- 21 articles published in 1999-2008 reported data on medication adherence in HIV-infected youth
- Examining adherence within the broader contextual issues, including HIV stigma and disclosure, caregiver stress, peer relations, mental health and substance use, and length of time on medications, may be most important to understanding how best to intervene with adherence among this population

WISNICKI, Reisner et al., 2009

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### Slide 62: HIV Antiretroviral Adherence and Intervention Studies Among HIV-Infected Youth

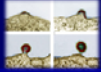
Advances in antiretroviral medications have resulted in declines in HIV-associated morbidity and mortality; high levels of adherence, however, are crucial to the success of HIV therapies. An article published by Reisner and colleagues reviews published studies in the U.S. on HIV-infected youth (ages 13 to 24 years), focusing on adherence to antiretroviral regimens and interventions designed to enhance adherence. A total of 21 articles published between 1999 and 2008 reported data on medication adherence in HIV-infected youth, of which 7 described unique interventions to enhance medication adherence. Five thematic areas were identified to classify factors associated with adherence. Findings suggest psychosocial factors, in particular depression and anxiety, were consistently associated with poorer adherence across studies. Three types of adherence interventions with HIV-infected youth were found. Results suggest that examining adherence within the broader contextual issues present in the lives of youth, including HIV stigma and disclosure, caregiver stress, peer relations, mental health and substance use, and length of time on medications, may be most important to understanding how best to intervene with adherence among this population. Secondary HIV prevention interventions for youth represent a possible mode through which to deliver individually tailored adherence skill building and counseling to improve medication adherence.



#### REFERENCE:

Reisner, S.L., Mimiaga, M.J., Skeer, M., Perkovich, B., Johnson, C.V., & Safren, S.A. (2009). A review of HIV antiretroviral adherence and intervention studies among HIV-infected youth. *Topics in HIV Medicine*, 17(1), 14-25.

**Alcohol's Effect on HIV Virus Growth**



- Alcohol has numerous effects, both direct and indirect, on how the HIV virus develops and how quickly it causes disease.
- Alcohol can increase how fast the virus replicates, leading to **higher amounts of virus** (i.e., the viral load) in the body.
  - Those high concentrations, in turn, can **increase the spread** of the disease.
  - In one study, women receiving antiretroviral therapy (ART) who drank moderately or heavily were more likely to have **higher levels** of the HIV virus, making it easier for them to spread the virus to others.

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**Slide 63: Alcohol's Effect on HIV Virus Growth**

HIV-positive people who drink heavily and who are not on anti-HIV drugs tend to have lower CD4 counts (a measure of immune system function) than moderate drinkers. While the same difference in CD4 count isn't true for heavy drinkers who are taking anti-HIV drugs, they are more likely to miss doses of their treatment than those who abstain from drinking alcohol.

Providers can examine a youth's adherence to HAART within the context of: HIV stigma, disclosure, caregiver stress, peer relations, mental health and/or substance use disorder co-occurrence, length of time on HIV medications.



REFERENCE:

Reisner, S.L., Mimiaga, M.J., Skeer, M., Perkovich, B., Johnson, C.V., & Safren, S.A. (2009). A review of HIV antiretroviral adherence and intervention studies among HIV-infected youth. *Topics in HIV Medicine*, 17(1), 14-25.

Photo credit: National Geographic AIDS Photo Gallery, <http://science.nationalgeographic.com/science/photos/aids/>.

**The Importance of Monitoring Alcohol Use Among HIV-Positive Individuals**

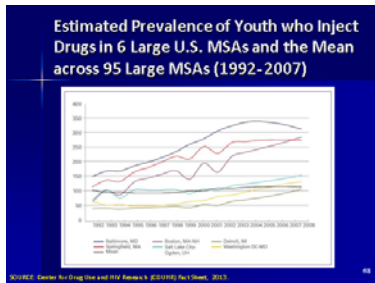
- Even intermittent use can complicate the clinical management of HIV-infected patients by:
  - Diminishing adherence to medications
  - Increasing risk of liver injury
  - Reducing the patient's ability to practice safer sex
  - Increasing the risk of side effects from medications
  - Changing pharmacokinetics of prescribed drugs

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**Slide 64: The Importance of Monitoring Alcohol Use Among HIV-Positive Individuals**

Clinicians may often miss alcohol problems in patients with clinically stable HIV infection and those without evidence of liver disease, which underscores the importance of screening all patients for alcohol use. The role of the primary care clinician in the management of the patient who abuses alcohol or is dependent on alcohol is as follows: (1) identify the problem; (2) present the diagnosis; (3) work to engage and motivate the patient; and (4) participate in the initiation of treatment and continuum of care.

	<p><b>Slide 65 [Transition Slide]: Special Considerations for Young Injection Drug Users (IDUs)</b></p> <p>This next portion of the presentation provides an overview of the special considerations for young injection drug users (IDUs), and the link between injection drug use and HIV risk behavior.</p>
	<p><b>Slide 66: Factors that May Influence Young Drug Users' Transition to Injection</b></p> <p>Some of the factors that influence the transition to IDU are: More pleasure (tolerance development): Injecting the drug provides a “better trip”, a stronger effect, and a quicker onset of the effect. This is especially relevant when tolerance to the drug begins to develop and the effects are no longer as strong. Many heroin users, for example, start by smoking or chasing and report initially being repulsed at the thought of using needles. However, as their tolerance to the drug increased young people found that they were unable to support their use (smoking heroin is inefficient and yields a considerably lower recovery rate than when injected). Curiosity about the effects of injecting, including the “rush” also appears to influence some young people to start injecting. With regards to financial considerations, injecting is more efficient, and it is cheaper than other forms since one can get more pleasure with a smaller dose. Lastly, with regards to visibility, injecting is less visible as it is faster than smoking and does not leave a detectable or distinct smell.</p> <p>Photo credit: Join Together Online, February 12, 2014.</p>
	<p><b>Slide 67: Injection Drug Use among Young People has Increased in the U.S.</b></p> <p>Increases in the number of young people who inject drugs are likely to lead to increased numbers of overdose deaths and HIV/AIDS, hepatitis C, and sexually transmitted infections. Recent increases in non-medical use of prescription opioids may lead new non-injecting opioid users to inject prescription opioids or transition to heroin or methamphetamine injecting. By monitoring the prevalence of injection drug use among youth (e.g., how many young people in the population inject drugs) can help to understand the number of youth at risk for poor health outcomes.</p>



### Slide 68: Estimated Prevalence of Youth who Inject Drugs in 6 Large U.S. MSAs and the Mean across 95 Large MSAs (1992-2007)

An NDRI-based research team conducted a study in which they hypothesized that injection drug use among young people would increase after the development of ART due to one or both of the following reasons: (1) Young IDUs would perceive HIV as less of a threat now that there was effective treatment; or (2) Young people would increasingly not have gone through the horrors that some communities of people who injected drugs (and their families and neighbors) went through during the early days of the AIDS epidemic. The research team conducted two studies to determine changes in the estimated number of young people who inject drugs aged 15-29 years from 1992-2007 in 95 metropolitan statistical areas (MSAs) of the United States. They used several data series to estimate the population prevalence of young people who inject drugs in MSAs. Multi-step approaches similar to those used in previous studies were employed to allocate the prevalence of young people who inject drugs in each MSA and to reduce biases in the data.

The number of young people who inject drugs (aged 15-29) declined between 1992 and 1995 and then increased from 1996 (mean = 96 per 10,000 youth) to 2002 (mean = 116 per 10,000 youth). The number of young people who inject drugs continued to increase through 2006-2007 (mean=>120 per 10,000 youth). The more young people who inject drugs in a population in a given year, the more drug-related deaths and accidental and unintentional poisoning deaths there were that year. This provides support for the notion that young people who inject drugs are at high risk for these poor outcomes including death.



#### REFERENCES:

1. Chatterjee S, Tempalski B, Pouget ER, Cooper HL, Cleland CM, & Friedman SR (2011). Changes in the prevalence of injection drug use among adolescents and young adults in large U.S. metropolitan areas. *AIDS and Behavior*, 15, 1570-1578.
2. Tempalski, B, Pouget, ER, Cleland, CM, Brady, JE, Cooper, HLF, Hall, HI, Lansky, A, West, BS, Friedman, SR (2013). Trends in the population prevalence of people who inject drugs in US Metropolitan Areas 1992-2007. *PLOS ONE*, 8(6), e64789.

### Injection Drug Use and Sexual Behavior

- Drug injectors are at risk of becoming infected with HIV virus and spreading the infection to their sex partners through unsafe sex.
- Injecting drug users can act as a bridge to transmit HIV to non-injectors with whom they have sexual contact.
- IDUs tend to underestimate the importance of condom use in sexual intercourse and have very low levels of condom use.

SOURCE: WHOCC (2004). HIV Prevention among Young Injection Drug Users. Geneva & San Francisco, 2004. 89

### Slide 69: Injection Drug Use and Sexual Behavior

In addition to sexual contact between drug injectors and non-injectors, drug injecting may also contribute to an increased incidence of HIV infection through HIV transmission to the children of drug injecting mothers (this is called “vertical transmission”). HIV is also a risk among drug abusers who do not inject drugs through high-risk sexual behavior. The impact of many types of psychoactive substances, whether injected or not, including alcohol, are risky to the extent that they are disinhibitors and affect the individual’s ability to make decisions about safe sexual behavior.

#### Additional Information for the Trainer(s)

In a study by Arasteh and Des Jarlais (2009), at-risk drinking among cocaine injectors was associated with distributive sharing of needles/syringes. At-risk drinkers were also more likely to engage in unprotected sex with a casual partner. Finally, among cocaine injectors alcohol intoxication during the most recent sex episode was associated with unprotected sex with a casual partner. These observations indicate that among HIV-positive IDUs at-risk drinking is associated with higher rates of injection and sexual risk behaviors and that alcohol intoxication is related to unprotected sex.



#### REFERENCE:

Arasteh, K., & Des Jarlais, D.C. (2009). At-risk drinking and injection and sexual risk behaviors of HIV-positive injection drug users entering drug treatment in New York City. *AIDS Patient Care and STDs*, 23(8), 657-661.

**Injection-Related HIV Risk Behavior**

- Direct sharing/repeated use of needles and syringes for injecting
- Indirect sharing/sharing of the paraphernalia used for drug injection
  - Sharing or using unclean water, cookers or cotton
  - Stirring drug solution with used syringe plungers
  - Squinting the drug solution from a previously blood-contaminated syringe into the drug



SOURCE: UNICEF (2016). [http://www.unicef.org/emerg/files/160416main\\_drug\\_users.pdf](http://www.unicef.org/emerg/files/160416main_drug_users.pdf)

**Slide 70: Injection-Related HIV Risk Behavior**

Young people share injection equipment more often than older drug users and that they perceive less risk in doing so. The risk of HIV transmission occurs through a variety of direct and indirect sharing activities. Risky injecting episodes usually took place within specific contexts, such as late at night or early morning with no access to sterile syringes, when people were ‘hanging out’ or withdrawing from drugs, or during periods of intoxication or binging.

**Additional Information for the Trainer(s)**

**Backloading:** The drug solution is transferred from one previously blood-contaminated syringe to another. The plunger is removed from the syringe into which the drug will be transferred and the drug mixture is then squirted into the back of the syringe.

**Frontloading:** The drug solution is transferred from one previously blood-contaminated syringe to another by removing the needle on the syringe receiving the solution, and then squirting the drug into the syringe’s hub or barrel. This is now relatively uncommon, since most insulin syringes used by IDUs do not have removable needles.

Photo credit: Wikipedia, March 5, 2014.



**Racial/Ethnic Disparities in HIV Rates among IDUs Globally**



- Racial/ethnic minority IDUs are twice as likely to be HIV seropositive than majority group IDUs from the same country
- Disparities are particularly high in the U.S. and China
- Addressing racial/ethnic disparities in HIV infection among IDUs is a fundamental issue in the fight against HIV, particularly in the context of growing emphasis on policies based on scientific evidence and human rights

SOURCE: Des Jarlais et al., 2012

**Slide 71: Racial/Ethnic Disparities in HIV Rates among IDUs Globally**

An estimated 16 million people across the globe inject drugs, and nearly 20% of these (approximately 3 million individuals) are infected with HIV. In many locations, high proportions of injection drug users belong to racial and ethnic minority groups, and these individuals appear to experience an increased likelihood of HIV infection compared to the racial/ethnic majority. Higher rates of HIV infection among minorities may have a number of negative implications for controlling the HIV epidemic among IDUs, including multiple reinforcing sources of stigmatization based on racial/ethnic minority status, injecting drug use, and HIV/AIDS, and reluctance on the part of IDU to utilize existing services for fear of stigmatization. Despite these concerns, little is known about racial/ethnic disparities in HIV prevalence among IDUs, which limits the ability to make recommendations to reduce such disparities.




REFERENCE:

Des Jarlais DC, Cooper H, Bramson H, Deren S, Hatzakis A, Hagan H (2012). Racial and ethnic disparities and implications for the prevention of HIV among persons who inject drugs. *Current Opinion in HIV and AIDS*, 7(4), 354-361.

**The Specific Issues of Young Injection Drug Users**

- Young IDUs are not the same as their older counterparts
  - Peer influence
  - Limited awareness
  - Limited access to services
  - Perceived lack of confidentiality at services
  - Economic instability



SOURCE: UNICEF. (2004). HIV Prevention among Young Injection Drug Users. 72

**Slide 72: The Specific Issues of Young Injection Drug Users**

**Peer influence:** Youth are curious and can be easily influenced by peer pressure. They often use or abuse drugs within their peer groups and are often guided by the peer norm, where drugs may be considered normal.

**Limited awareness:** Young IDUs often have limited education, awareness and knowledge of the HIV virus. Information and communication material that may be available is often not written for young people. They may know little about the drugs, their effects, the risks associated with drug abuse, especially drug injection, safer injecting practices and reducing their risk behavior. Risks to health may be regarded as distant or remote as young IDUs do not experience the complexity and severity of health problems as often as they may be encountered by older IDUs who have injected for longer (abscesses, gangrene . . .). It may be difficult for young IDUs to understand the need for prevention efforts when they have not experienced health problems as a result of their own injection drug use.

**Limited access to services:** Services are often perceived by youth as unfriendly to young people. Young IDUs are often unaware of the existence of health, social, legal and welfare services that could be of help to them. They may not know how to access these services.

**Lack of confidentiality at services:** Young people, as well as adults in this case, may feel ashamed, fear stigmatization or the lack of privacy and confidentiality when considering approaching treatment services. They may be afraid to make their problem visible, and thus avoid using services.

**Economic instability:** While adult IDUs usually have an income (at least initially), youth often suffer from economic instability, as they are unemployed and often unskilled after dropping out of school. Many youths have to resort to crime or commercial sex work to get money for drugs.

*(Notes for Slide 72, continued)*

## **Slide 72: The Specific Issues of Young Injection Drug Users**

### **Additional Information for the Trainer(s)**

In light of the UNODC findings presented on this slide, it is important to highlight the results of a National Institute on Drug Abuse-sponsored randomized clinical trial that showed, with respect to opioid dependence, young adults are more like their adult counterparts than we have been comfortable thinking they were. The findings of the NIDA Clinical Trials Network Study conducted by Dr. George Woody and colleagues indicate that longer-term treatment with buprenorphine-naloxone may be more effective for young adults than short-term term detoxification (short-term detoxification led to near universal relapse to opioid use). When compared to those in the detoxification group, subjects in the 12-week condition showed: (1) fewer opioid positive urines; (2) greater retention in active treatment phase; (3) lowered use of marijuana and cocaine use and injection drug use; (4) effect only during active treatment with buprenorphine. Also, it is important to continue providing supportive counseling during the taper period. With regards to the efficacy of using naltrexone following the buprenorphine taper, it is important to note that: (1) naltrexone is an opioid receptor antagonist; (2) it can only be used after discontinuation of buprenorphine; (3) it blocks the ability of endogenous opioids to stimulate the receptor; and (4) it can assist the patient in remaining drug free as part of a long-term recovery counseling program.



### **REFERENCES:**

1. Fiellin, D. A. (2008). Treatment of adolescent opioid dependence: No quick fix. *Journal of the American Medical Association, 300*(17), 2057-2059.
2. Woody, G. E., Poole, S. A. Subramaniam, G., Dugosh, K., Bogenschutz, M., Abbott, P., et al. (2008). Extended vs short-term buprenorphine-naloxone for treatment of opioid-addicted youth: a randomized trial. *Journal of the American Medical Association, 300*(17), 2003-2011.

Photo Credit: CA DPH, Hep C Presentation, January 2014.

**Increasing Reports of Injection-Related HCV Infection among Persons under Age 30**

- Recent increases seen in at least 18 states
- Clustered specifically among young IDUs

© CDC. See Clark, (2014). *Hepatitis C Infection in Adolescents and Young Adults: The Second Wave Epidemic*.

**Slide 73: Increasing Reports of Injection-Related HCV Infection among Persons under Age 30**

Several states have reported an increase in Hepatitis C cases among individuals under age 30, and in many states, the cases are clustered specifically among young injection drug users. The incidence maps on the right side of the slide are from the National Notifiable Disease Surveillance System. Possible reasons for this increase include: a quadrupling of oral prescription opioid sales between 2000 and 2010; increased access to heroin with injection as preferred route of administration; variability in drug use patterns between jurisdictions (urban vs. suburban vs. rural); and a reduced focus on prevention of blood borne diseases among IDU nationally.



**REFERENCE:**

Church, D. (2014). Hepatitis C Infection in Adolescents and Young Adults: The Second Wave Epidemic. Presentation available at: <http://www.cdph.ca.gov/programs/Documents/HepCinYouth01-29-14.pdf>.

**Assessment and Intervention Strategies**

**Slide 74 [Transition Slide]: Assessment and Intervention Strategies**

Much of what we know about clinical approaches comes from treatment effectiveness studies. These studies tell us about the effectiveness of different treatment models for adolescents with substance use disorders. They include studies with programs deemed “evidence-based.” Evidence-based programs have proven to be successful through research methodology and have produced a consistent pattern of positive results.

**The Clinical Situation is Difficult because Clinical Risk Differs**

**Slide 75: The Clinical Situation is Difficult because Clinical Risk Differs**



**Read the Calvin and Hobbes cartoon aloud to the audience and elicit their reactions as to the relevance of the cartoon to the issue of adolescent substance use and abuse.**

Marijuana and alcohol are gateway drugs that initiate the trajectory toward use of harder drugs.

- A. Strongly Disagree
- B. Disagree
- C. Neutral
- D. Agree
- E. Strongly Agree

### Slide 76: What do you think?



**Read the question and choices, and review audience responses out loud.**



\*\*Audience Response System (ARS)-compatible slide

No empirical data exists to support the gateway drug theory. If you take available data and control for access, the gateway phenomenon goes away. Individuals young and old will use substances that (1) make them feel good, or (2) make them feel better (in other words, they use what works for them). Sometimes, people experiment with drugs to have fun; others experiment to cope with issues they are facing with school, family, or friends. If alcohol and marijuana don't work, they will keep looking for other avenues (e.g., drugs) until they find something that works better. Clinicians need to pay attention to any substance among youth so that initial experimentation does not evolve to issues of abuse and dependence.

### Continuum of Adolescent Substance Use

Substance Use	Experimentation	Social/Recreational Use	Misuse	Abuse	Dependence
Substance Use	Minimal	Low	High	Very High	Severe
Duration	Short	Medium	Long	Very Long	Life-long
Control	High	Medium	Low	Very Low	None
Consequences	Minimal	Low	High	Very High	Severe

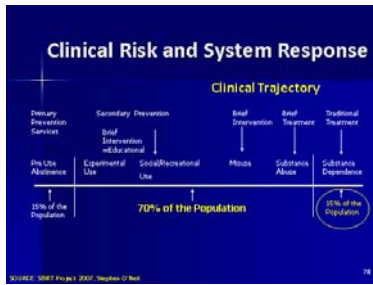
*Note: The table contains detailed criteria for each level of use, including symptoms like loss of control, tolerance, and withdrawal.*

### Slide 77: Continuum of Adolescent Substance Use

Substance use disorders develop along a trajectory, from experimentation and social/recreational use to misuse, abuse, and dependence. This table characterizes each level of use along the continuum.

#### Additional Information for the Trainer(s)

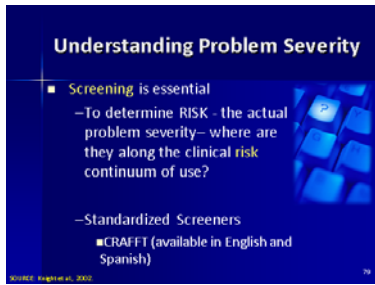
In the United States, the Diagnostic and Statistical Manual of Mental Disorders (DSM) serves as a universal authority for psychiatric diagnosis. Treatment recommendations, as well as payment by health care providers, are often determined by DSM classifications. When the DSM-5 was released by the American Psychiatric Association in May 2013, it marked the end of more than a decade's journey in revising the criteria for the diagnosis and classification of mental disorders. The DSM-5 discusses substance use disorders as a continuum disorder (mild-moderate-severe), which is more accurate than previous versions of the DSM in describing substance use disorders. The severity of the SUD is based on the number of criteria/symptoms endorsed.



### Slide 78: Clinical Risk and System Response

If you look at the clinical trajectory of substance use disorders, you see that 70% of the population falls in the middle of the continuum (from experimentation to substance abuse). The remaining 30% of the population either fall in the pre-use/abstinence stage (15%) or substance dependence (15%).

This figure, which is not specific to adolescents and young adults but includes all users, highlights the clinical responses that can be used at each stage of the substance use disorder continuum. For example for those individuals who are experimenting with substances or using substances socially/recreationally, secondary prevention techniques such as a brief intervention is warranted. At the far right end of the continuum are the individual who have been diagnosed with substance dependence. In that stage, traditional substance use disorder treatment (outpatient/residential) is warranted. It is important to note that this schematic is based on the DSM-IV-TR.



### Slide 79: Understanding Problem Severity

Routine alcohol and drug screening provides clinicians with the opportunity to query all clients/patients about their substance use to determine if they are using at risky levels.

By utilizing a standardized screening instrument, clinicians do not have to make a “judgment call” to subjectively determine who might actually be at risk for developing a substance use disorder. Adolescents are highly responsive to judgment and criticism, so it is best to approach the topic of substance use in an objective manner. Several validated screeners are available for free in the public domain, and include the CRAFTT, AUDIT, DAST, and ASSIST. It is important to note that any alcohol or drug use among individuals under the age of 21 is considered risky (and illegal), because the legal drinking age is 21.



#### REFERENCES:

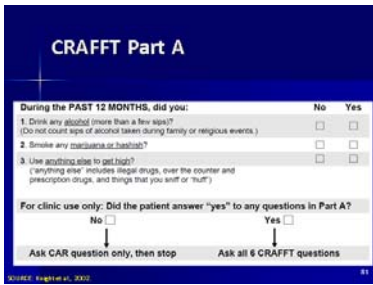
1. CRAFTT: <http://www.ceasar-boston.org/clinicians/crafft.php>
2. AUDIT: [http://whqlibdoc.who.int/hq/2001/who\\_msd\\_msb\\_01.6a.pdf](http://whqlibdoc.who.int/hq/2001/who_msd_msb_01.6a.pdf)
3. ASSIST: [http://www.who.int/substance\\_abuse/activities/assist/en/](http://www.who.int/substance_abuse/activities/assist/en/)
4. DAST:  
<http://www.smchealth.org/sites/default/files/docs/1309587937DRUGUSEQUESTIONNAIRE.pdf>.
5. Knight, JR, Sherritt, LA, et al. (2002). Validity of the CRAFTT substance abuse screening test among adolescent clinic patients. *Archives of Pediatric and Adolescent Medicine*, 156(6), 607-614.



### Slide 80: Substance Use Screening Activity

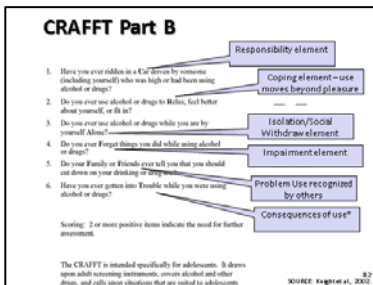
The next three slides correspond to a quick group activity to help orient training participants to a standardized screening process, and become comfortable asking their patients/clients questions about their alcohol and drug use. The CRAFTT screening tool, developed by a Boston University-based research team, will be used for this activity, and will be described in more detail in the next few slides.

Photo credit: Join Together Online, 2014.



**Slide 81: CRAFFT Part A**

The CRAFFT is a behavioral health screening tool for use with adolescents and young adults under the age of 21 and is recommended by the American Academy of Pediatrics' Committee on Substance Abuse for use with adolescents. The screener consists of 6 questions developed to screen adolescents for high risk alcohol and other drug use disorders simultaneously. It is short and effective, and is meant to assess whether a longer conversation about the context of use, frequency, and other risks and consequences of alcohol and other drug use is warranted.



**Slide 82: CRAFFT Part B**

CRAFFT is a mnemonic acronym of first letters of key words in the six screening questions. The questions should be asked exactly as written; the questions are vague and broad, and none should be particularly threatening to adolescents.

**C** – Have you ever ridden in a CAR driven by someone (including yourself) who was "high" or had been using alcohol or drugs?

**R** – Do you ever use alcohol or drugs to RELAX, feel better about yourself, or fit in?

**A** – Do you ever use alcohol/drugs while you are by yourself, ALONE?

**F** – Do you ever FORGET things you did while using alcohol or drugs?

**F** – Do your family or FRIENDS ever tell you that you should cut down on your drinking or drug use?

**T** – Have you gotten into TROUBLE while you were using alcohol or drugs?

- A Score of 1: No Evidence of risk.
- A Score of 2 or more: Positive screen; indicates need for further assessment.



**REFERENCE:**

Knight, JR, Sherritt, LA, et al. (2002). Validity of the CRAFFT substance abuse screening test among adolescent clinic patients. *Archives of Pediatric and Adolescent Medicine*, 156(6), 607-614.



### CRAFFT Practice Session – “Alex”

An 18-year old named Alex presented to the ER with minor injuries sustained in a single-car motor vehicle accident. The ER nurse asked the 3 CRAFFT opening questions. Alex replied that (s)he had used alcohol and marijuana during the past 12 months. The nurse asked the CRAFFT questions and documented that Alex responded “Yes” to 3 of the questions. She then called the covering physician to discuss how to respond to Alex’s CRAFFT total score of 3\*\*.

**Scoring\*\*:**

1: No Evidence of risk; 2+: Positive screen, indicates need for further assessment.

83

### Slide 83: Activity – CRAFFT Practice Session – “Alex”



**\*\*Allow 10-15 minutes for this activity\*\***

**With regards to introducing the CRAFFT screening process to the adolescent, it is helpful to keep the following recommendations in mind:**

- 1. It is critical to provide a gentle introduction to talking about substance use—which may be awkward or embarrassing. It is important to tell the adolescent that some questions are personal and that the information is confidential.**
- 2. Adolescents may be surprised by the desire to ask them questions about substance use, so your job as the interviewer is to normalize this procedure as much as you can. You can do this by being straight-forward about the screening, e.g., “This is part of routine care that we provide.” You want to tell the adolescent that you are asking the questions in order to provide the best possible care.**
- 3. Also, you want to tell the adolescent that he or she doesn’t have to answer a question if they are uncomfortable.**

**If a comfortable environment is created for adolescents, most will respond well to the screening and will provide honest answers. Even if the adolescents underestimate their use (or are not completely honest about their substance use), the provider will still have a very good chance of identifying their risk level.**

**To get acquainted with the questions included on the CRAFFT, participants are asked to break into pairs. One person will play the role of a clinician and the other person will play the adolescent. Refer participants to the blank CRAFFT form in the materials packet. The clinician should introduce the CRAFFT as described above, and then run through the questions of the CRAFFT. For the person playing the clinician, make sure the questions are asked exactly as they are written and read the response options to the adolescent. For those playing the adolescent, make up your own answers; just don’t make them too tricky or hard, and refrain from role playing the most difficult kid ever!**

**Allow the audience a minute to form pairs and locate the CRAFFT in their materials. Leave this slide up during the run-through so people can refer back to these statements. Give the participants 5 minutes to complete this portion of the activity.**

*(Notes for Slide 83, continued)*

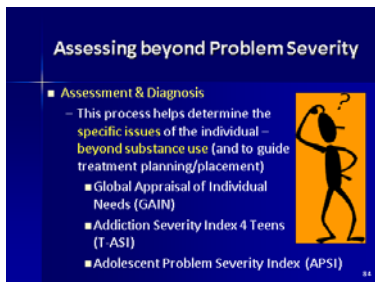


**Slide 83: Activity – CRAFFT Practice Session – “Alex”**

**Allow 5-7 minutes for the de-brief portion of the activity. Bring the full group back together, and ask people for their feedback regarding specific items on the CRAFFT. What are their initial reactions to the questions as they are written?**

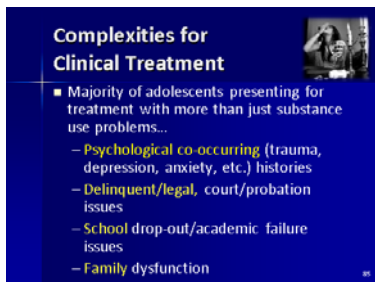
**Additional Information for the Trainer(s)**

Some people may comment that a question is vague or poorly worded. In response, acknowledge their feedback and reassure them that no instrument is perfect, but the CRAFFT has undergone a tremendous amount of research and has very good reliability and validity. This means that it works well to identify risky substance use, even if some of the questions seem to be poorly worded.



**Slide 84: Assessing beyond Problem Severity**

This slide corresponds specifically to the assessment and diagnosis process. The GAIN, T-ASI, and APSI are all examples of assessment tools that can be utilized with an adolescent population, and are more in-depth than the screeners described on the previous slides. Interested practitioners can look into the proprietary nature of the assessment tools, as well as their length, to determine which is most in line with their needs. The information gathered during the assessment and diagnosis process can be used to guide further conversations with the adolescent, once he/she is engaged in the treatment process.



**Slide 85: Complexities for Clinical Treatment**

It is essential for providers to understand the context of alcohol and drug use among adolescents. Oftentimes, it’s not just substance use, but substance use in the context of other issues and problems (trauma, abuse, relationship issues, etc.). Substance use can either lead to other issues, or substances can be used to mask other primary issues. How you intervene may be different depending on the reasons the adolescent is using alcohol and other drugs. The adolescent’s relationships with his/her family is a critical area to explore in more detail, as is problems/difficulties with school and criminal justice involvement (intervene with the whole person and not just a single issue).

### Adverse Childhood Experiences Study (ACE)

- Ongoing collaborative research between the CDC and Kaiser Permanente
- Over 17,000 Kaiser patients participating in routine health screening volunteered to participate in the study
- Data reveal staggering proof of the health, social, and economic risks that result from childhood trauma



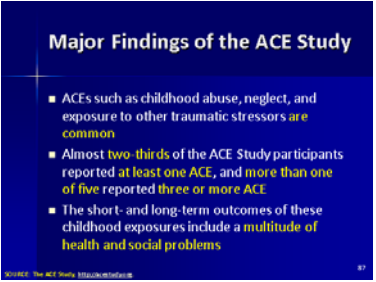
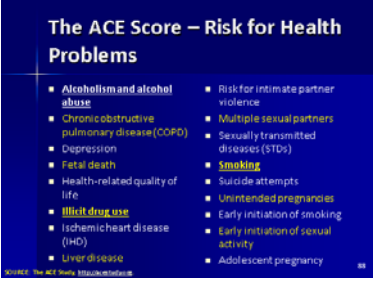
### Slide 86: Adverse Childhood Experiences Study (ACE)

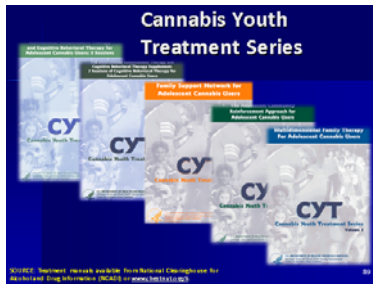
The ACE Study is ongoing collaborative research between the Centers for Disease Control and Prevention in Atlanta, GA, and Kaiser Permanente in San Diego, CA and represents one of the largest investigations ever conducted to assess associations between childhood maltreatment and later-life health and well-being. The Co-Principal Investigators of the study are Robert F. Anda, MD, MS, with the CDC; and Vincent J. Felitti, MD, with Kaiser Permanente. Over 17,000 Kaiser patients participating in routine health screening volunteered to participate in the study. Data resulting from their participation continues to be analyzed; it reveals staggering proof of the health, social, and economic risks that result from childhood trauma. The CDC provides access to the peer-reviewed publications resulting from The ACE Study (<http://www.cdc.gov/violenceprevention/acestudy/>). To date, more than 50 scientific articles have been published and more than 100 conference and workshop presentations have been made.

The ACE Study findings suggest that certain experiences are major risk factors for the leading causes of illness and death as well as poor quality of life in the United States. It is critical to understand how some of the worst health and social problems in our nation can arise as a consequence of adverse childhood experiences. Realizing these connections is likely to improve efforts towards prevention and recovery.

#### Additional Information for the Trainer(s)

The ACE Pyramid (pictured on slide 56) represents the conceptual framework for the study. During the time period of the 1980s and early 1990s, information about risk factors for disease had been widely researched and merged into public education and prevention programs. It was also clear, however, that risk factors, such as smoking, alcohol abuse, and sexual behaviors for many common diseases were not randomly distributed in the population. In fact, it was known that risk factors for many chronic diseases tended to cluster, that is, persons who had one risk factor tended to have one or more other risk factors too. Because of this knowledge, the ACE Study was designed to assess what we considered to be “scientific gaps” about the origins of risk factors. These gaps are depicted as the two arrows linking Adverse Childhood Experiences to risk factors that lead to the health and social consequences higher up the pyramid. Specifically, the study was designed to provide data that would help answer the question: “If risk factors for disease, disability, and early mortality are not randomly distributed, what influences precede the adoption or development of them?” By providing information to answer this question, we hoped to provide scientific information that would be useful for developing new and more effective prevention programs.

<p><i>(Notes for Slide 86, continued)</i></p>	<p><b>Slide 86: Adverse Childhood Experiences Study (ACE)</b></p> <p>The ACE Study takes a whole life perspective, as indicated on the orange arrow leading from conception to death. By working within this framework, the ACE Study began to progressively uncover how adverse childhood experiences (ACE) are strongly related to development and prevalence of risk factors for disease and health and social well-being throughout the lifespan.</p>
 <p><b>Major Findings of the ACE Study</b></p> <ul style="list-style-type: none"> <li>■ ACEs such as childhood abuse, neglect, and exposure to other traumatic stressors <b>are common</b></li> <li>■ Almost <b>two-thirds</b> of the ACE Study participants reported <b>at least one ACE</b>, and <b>more than one of five</b> reported <b>three or more ACE</b></li> <li>■ The short- and long-term outcomes of these childhood exposures include a <b>multitude of health and social problems</b></li> </ul>	<p><b>Slide 87: Major Findings of the ACE Study</b></p> <p>Childhood abuse, neglect, and exposure to other traumatic stressors which are termed adverse childhood experiences (ACE) are common. Almost two-thirds of our study participants reported at least one ACE, and more than one of five reported three or more ACE. The short- and long-term outcomes of these childhood exposures include a multitude of health and social problems.</p>
 <p><b>The ACE Score – Risk for Health Problems</b></p> <ul style="list-style-type: none"> <li>■ <b>Alcoholism and alcohol abuse</b></li> <li>■ <b>Chronic obstructive pulmonary disease (COPD)</b></li> <li>■ <b>Depression</b></li> <li>■ <b>Fatal death</b></li> <li>■ <b>Health-related quality of life</b></li> <li>■ <b>Illicit drug use</b></li> <li>■ <b>Ischemic heart disease (IHD)</b></li> <li>■ <b>Liver disease</b></li> <li>■ <b>Risk for intimate partner violence</b></li> <li>■ <b>Multiple sexual partners</b></li> <li>■ <b>Sexually transmitted diseases (STDs)</b></li> <li>■ <b>Smoking</b></li> <li>■ <b>Suicide attempts</b></li> <li>■ <b>Unintended pregnancies</b></li> <li>■ <b>Early initiation of smoking</b></li> <li>■ <b>Early initiation of sexual activity</b></li> <li>■ <b>Adolescent pregnancy</b></li> </ul>	<p><b>Slide 88: The ACE Score – Risks for Health Problems</b></p> <p>The ACE Study uses the ACE Score, which is a total count of the number of ACEs reported by respondents. The ACE Score is used to assess the total amount of stress during childhood and has demonstrated that as the number of ACE increase, the risk for the health problems featured on the slide increases in a strong and graded fashion.</p> <p>A wealth of information related to the ACE Study is available at:  <a href="http://www.cdc.gov/violenceprevention/acestudy/">http://www.cdc.gov/violenceprevention/acestudy/</a>.</p>



## Slide 89: Cannabis Youth Treatment Series

The Cannabis Youth Treatment (CYT) was designed to adapt five promising adolescent treatments for use in clinical practice, and then to field test their effectiveness in the largest randomized experiment ever conducted with adolescent marijuana users seeking outpatient treatment. These treatments vary in terms of length (6 to 14 weeks), mode (individual, group, and family), planned number of sessions (5 to 23), theoretical orientation, and their approach to resource utilization/cost. All approaches have been recommended by expert panels and/or by earlier reviews of treatment research.

The studies aim to (1) test the relative effectiveness and cost-effectiveness of a variety of interventions which are targeted at reducing/eliminating marijuana use and its associated problems in adolescents, and (2) provide validated models of these interventions for the treatment field. The study was funded by the Center for Substance Abuse Treatment, and has been conducted by Chestnut Health Systems (CHS-MC) in Bloomington and Madison County, IL, Alcohol Research Center (ARC) in Farmington, CT, Operation PAR in St. Petersburg, FL, and the Child Guidance Center (CGC) in Philadelphia, PA.

Preliminary results suggested that all five of the CYT treatments were more effective than current practice, so CSAT released the manuals to the field in 2000. Four of the five components are described in separate entries in the EBP database; component 4 (ACRA) is not yet listed separately pending publication of research results, however, the manual is available.

**MET/CBT5** - This is a five-session treatment composed of two individual sessions of Motivational Enhancement Therapy (MET) and three weekly group sessions of Cognitive-Behavioral Therapy (CBT). The MET sessions focus on factors that motivate participants who abuse substances to change, while in the CBT sessions, participants learn skills to cope with problems and meet needs in ways that do not involve turning to marijuana or alcohol. This treatment is designed to be inexpensive and in line with what many parents and insurers are seeking as a basic intervention. (See also separate entry for MET/CBT.)

**MET/CBT12** - This treatment is composed of two sessions of MET and ten weekly group sessions of CBT. This treatment is designed to provide more of the same kind of treatment as MET/CBT5 to test for dosage effects and is more in line with what many providers try to provide. (See also separate entry for MET/CBT.)

*(Notes for Slide 89, continued)*

**Slide 89: Cannabis Youth Treatment Series**

**FSN** - The Family Support Network (FSN) treatment includes the MET/CBT12 group therapy plus additional engagement-type case management, family support groups, and aftercare. This treatment was designed to wrap several additional low-cost services around the MET/CBT12 group therapy. This treatment is designed to try and address family issues and services in line with CSAT TIPS recommendations (See also separate entry for FSN).

**ACRA** - The Adolescent Community Reinforcement Approach (ACRA) is composed of ten individual sessions with the adolescent and four sessions with caregivers. The focus is on rearranging environmental contingencies so that abstinence from marijuana is more rewarding than using behavior. ACRA will teach participants how to build on their reinforcers, how to use existing community resources that will support positive change, and how to develop a positive support system within the family.

**MDFT** - Multidimensional Family Therapy (MDFT) is a twelve-week, is composed of 12 to 15 individual family-focused sessions plus additional phone and case management contacts. Sessions are with the participant and his/her family on an individual basis with more focus on roles, other problem areas and their interaction. This treatment tries to use a more integrated approach to family issues and focuses on helping adolescents build more effective and age-appropriate interpersonal and conflict resolution skills while helping parents establish a more effective and supportive parenting style. Treatment also focuses on building appropriate social supports with peers, schools and other involved services providers. (See also separate entry for MDFT).

These five treatments can also be grouped in several different ways. First, they vary by mode - with the first three being combinations of individual and group approaches and the last two being purely individual treatment approaches. Second, the MET/CBT and ACRA interventions are based on behavioral treatment approaches while the FSN and MDFT interventions are based on family treatment approaches. Third, they are expected to vary in terms of increasing resource intensity and cost.

*(Notes for Slide 89, continued)*

### **Slide 89: Cannabis Youth Treatment Series**

Outcomes at one-year indicated that though the CYT treatments were more effective than many earlier outpatient treatments, over 2/3rds of the CYT adolescents were still having problems 12 months later. In general, the interventions were successful and affordable in a wide range of settings, and the initial costs of treatment were quickly offset by reductions in other costs to society.



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Available for download at: <http://store.samhsa.gov/shin/content//SMA05-4103/SMA05-4103.pdf>.

#### **Volume 4: Adolescent Community Reinforcement Approach (ACRA)**

Godley, S.H., Meyers\*, R.J., Smith\*, J.E., Godley, M.D., Titus, J.M., Karvinen, T., Dent, G., Passetti, L., & Kelberg, P. (2001). Chestnut Health Systems, Bloomington, IL USA, and \*University of New Mexico, Albuquerque, NM USA.

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*(Notes for Slide 89, continued)*

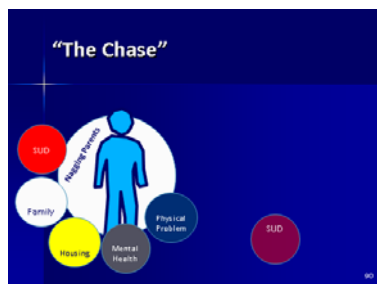
**Slide 89: Cannabis Youth Treatment Series**



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**Volume 5: Multidimensional Family Therapy (MDFT)**

Liddle, H.A. (2002). University of Miami, Miami, FL USA.  
(Manual not available online)



**Slide 90: "The Chase"**



**\*\*ANIMATION\*\***

It is critical that providers meet the young person where they are at; in other words, focus on his/her presenting problem. If you focus on what you think the adolescent needs help with, you end up in a "chase," where you focus on what you, as the expert, think the issue is, and not what young person is willing to discuss. To provide an example, if you think the adolescent's adolescent use is the primary issue, but he wants to talk about his nagging parents, you could say, "how important is it for you to get your mom off your back?" By asking this question, you can get him to talk about his relationship with his mom, which will undoubtedly unearth an issue with his marijuana use. So you will get to your issue eventually, but the young man will feel heard because you chose to focus on the one thing (his nagging mom) he was willing to talk about with you.





### Slide 91: Where do you Start?



#### **\*\*ANIMATION\*\***

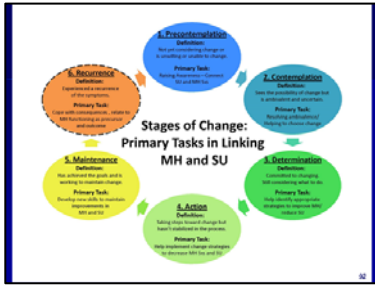
We have to start by assessing how aware the patient is of his or her substance use and the consequences (e.g., where are they at in terms of their stage of change?).

#### ***Click to animate first sentence.***

What we do depends on where the patient is in the process of changing. Most of the time patients are coming to us for other concerns and have not thought about changing their substance use.

#### ***Click to animate second sentence.***

The first step, then, is the identify from where our patients are coming. We want to know how substance use fits into people's lives so we can understand their situation. In other words, you assess their readiness to change, and meet them where they are currently.



### Slide 92: Stages of Change – Primary Tasks in Linking MH and SU

The Stages of Change is a theoretical perspective introduced by Prochaska and DiClemente more than 20 years ago to help professionals understand their clients with addiction problems and motivate them to change. Their model is based not on abstract theories but on their personal observations of how people went about modifying problem behaviors such as smoking, overeating and problem drinking. The Stages of Change can help clinicians understand where a person is coming from in terms of their substance use. At the top in blue is the first stage called **precontemplation**. At this stage people do not see a problem with their use and are not considering change.



*Use a pointer so participants can follow along on screen.*

The stages that follow are contemplation, determination, action, maintenance, and recurrence. **Contemplation** is a stage that we strive to move patients to if they are at risk for substance use related problems. Patients in the contemplation stage can see the possibility of change, but they are ambivalent about changing. The **determination** stage is where we begin to identify strategies for change. **Action** is where changes are taking place. **Maintenance** is where patients have achieved their goal and are working to maintain their new behaviors. **Recurrence** is when patients may relapse or go back to their old behaviors. Recurrence is part of the process of changing.

### Slide 93: Stages of Change Intervention Matching Guide to Link MH and SU

Stages of Change: Intervention Matching Guide to Link MH and SU		
<p><b>1. Pre-contemplation</b></p> <ul style="list-style-type: none"> <li>Offer factual information about MH/SU connection</li> <li>Explore the events that brought them to treatment—impact of triggers</li> <li>Explore reality of previous efforts to improve MH. What was the role of SU?</li> <li>Explore pros and cons of increasing MH and decreasing SU</li> </ul>	<p><b>2. Contemplation</b></p> <ul style="list-style-type: none"> <li>Explore the patient's extent of self-efficacy to reduce MH symptoms</li> <li>Explore expectations about change—what is the role of MH and SU?</li> <li>Summarize self-motivational statements for change in MH and SU</li> <li>Continue exploration of pros and cons of increasing MH and decreasing SU</li> </ul>	<p><b>3. Preparation</b></p> <ul style="list-style-type: none"> <li>Offer many options for addressing MH/SU and SU</li> <li>Help identify pros and cons of various change options</li> <li>Identify and lower barriers to change</li> <li>Seek social and/or peer support</li> <li>Encourage patient to qualify assurance about to change</li> </ul>
<p><b>4. Action</b></p> <ul style="list-style-type: none"> <li>Support a realistic view of change through small steps</li> <li>Identify high-risk situations for SU and discuss role in MH functioning</li> <li>Develop coping strategies</li> <li>Focus on building new mechanisms of positive change including having better</li> <li>Help access family/social/peer support</li> </ul>	<p><b>5. Maintenance</b></p> <ul style="list-style-type: none"> <li>Help identify and to anticipate substance use and their relation to maintain goals</li> <li>Monitor expectations, content and highlight progress in maintaining change/achieving MH and SU</li> <li>Set new short- and long-term goals for MH and SU</li> </ul>	<p><b>6. Relapse</b></p> <ul style="list-style-type: none"> <li>Frame relapse as a learning opportunity—what was the impact on MH?</li> <li>Explore associated psychological, behavioral and social consequences</li> <li>Help to develop alternative coping strategies for strong emotions</li> <li>Encourage patient to stay in the process and maintain support</li> </ul>

This chart shows what strategies we can employ with patients at the different stages of readiness to change. If we look at the first two stages—which are most relevant for people engaging in at-risk levels of substance use—we can see that our goals are just to offer information or feedback, explore the meaning of events, explore pros and cons of substance use, and build self-efficacy.

Patients may not be ready to make a change at the time of this brief intervention. However, they may be willing to explore the pros and cons of their use, or track levels of use to see if they may have a more significant problem than they realized. By linking the interventions to where they are in the stages of change, we can help to move them forward in the stages and increase the likelihood that they will take action.

If we get ahead of them (ask them to take action before they have identified that they even have a problem), we are likely to stimulate resistance.

**How you Communicate with an Adolescent Matters**

You are singing off key if you find yourself...

- Challenging
- Warning
- Finger-wagging
- Moralizing
- Giving unwanted advice
- Shaming
- Labeling
- Confronting
- Being Sarcastic
- Playing expert



**Slide 94: How you Communicate with an Adolescent Matters**

More motivational approaches to communicating with adolescents and young adults are work better than confrontational ones. The Office of Adolescent Health (U.S. DHHS) recommends a number of strategies that can be utilized by clinicians when communicating with adolescents and young adults:

- **Nurture a warm relationship:** Teens tend to be more willing to accept and make parental values their own when they feel close to their parents. And close families usually have many shared interests and values that reinforce each other. Thus, keeping a strong relationship lies at the foundation of nurturing positive values in your teen.
- **Show and tell what matters:** A key to your influence on teens’ values is that they understand what really matters to you. The best way to make sure teens understand what really matters to you is to both show and tell—help them see the values in action in your own life, then talk about why you do what you do. Getting their attention, being clear, and regularly reinforcing the values all help teens understand the values you hope for them—increasing the likelihood that they will make those values their own.
- **Promote open communication:** Teens are more likely to take on their parents’ values when they have open, frequent, and honest communication with each other—when teens feel comfortable talking with their parents about tough issues and about things that matter to them. Open communication increases the odds that teens will listen to and embrace their parents’ values. In addition, parents gain a greater understanding of how their teens think and what’s important to them. That makes it easier to connect the parents’ values with the teens’ own emerging values.
- **Pay attention to their world and interests:** When you show interest in the things that matter to adolescents, you show them that you care about their choices and activities. That attentiveness, in turn, motivates your teen to pay attention to and accept your values and expectations.
- **Give your teen choices and appropriate independence:** Believing that they have power in their own lives and can influence others can help adolescents develop their own values. If parents don’t give choices or don’t see their teens as unique individuals, young people may end up pushing away in order to develop their own sense of who they are.
- **Provide information, guidelines, and structures:** In addition to giving teens opportunities to make their own choices, it is just as important to set clear and fair expectations and consequences then follow through with the consequences when needed.

*(Notes for Slide 94, continued)*

**Slide 94: How you Communicate with an Adolescent Matters**

- **Learn from your teen:** Your relationship with your teen is a two-way street. You learn from each other. Through their experiences, they may develop values and beliefs that enrich your life and help you see the world and other people in new ways. Be open to what they have to teach you. In the process, they will be open to what you have to teach them.
- **Make sure your values are in sync with the other parent (when applicable):** Shared values between parents increase the likelihood that their teens will accept their value priorities. If values are not shared, teens may feel conflicting loyalties in picking which values to adopt as their own.
- **Cultivate skills to put values into practice:** In order to develop values, teens need skills to help them be confident in standing up for what they believe and to take actions based on their values. Building assertiveness and the ability to resist peer pressure, the ability to understand what it feels like to be in somebody else's shoes, and the skills of caring and compassion all help to reinforce positive values.
- **Provide experiences that reinforce positive values and commitments:** If caring for others is important, give young people opportunities to care for others. If being honest is important, give them opportunities to be honest. If being generous is important, give them opportunities to share. If being responsible is important, give them responsibilities where others are depending on them. When you do, be sure to talk about or reflect on the experience, so they become more articulate about why they do what they do.
- **View mistakes as teachable moments:** Teens are going to make mistakes sometimes and not live up to your values or their own values. Sometimes these mistakes are fairly trivial; sometimes they have big consequences. In each case, remember to keep your relationship with your teen as a priority, and find ways for both of you to learn from your mistakes. Think together through appropriate consequences as well as other ways to deal with the issue in the future. That may take time, but it can pay off in the long run.

*(Notes for Slide 94, continued)*

**Slide 94: How you Communicate with an Adolescent Matters**

- **Recognize the limits:** Even though you can and do influence your teens' values, you don't control them. For better or worse, many factors also influence the values teens develop. That can include media, friends, teachers, coaches, and celebrities. It can also include world events that "print" values and priorities into young people's consciousness. So your children won't necessarily see the values you share as being as important as you see them. Indeed, they may choose to reject some values that are really important to you. That doesn't mean you have failed; it means they are becoming their own persons.

It is important to approach the topic of substance use very delicately because it will likely lead to resistance.

- A. Strongly Disagree
- B. Disagree
- C. Neutral
- D. Agree
- E. Strongly agree

**Slide 95: What do you think?**



***Read the question and choices, and review audience responses out loud.***



\*\*Audience Response System (ARS)-compatible slide

This is an opinion question, and presents a good opportunity to engage the audience in a very brief discussion on what is meant by resistance. When it comes to resistance, the harder you (as the clinician) push a client, the harder he/she pushes back. You initiate a challenge, and the client responds. They push back for a variety of reasons, including because they feel inferior and want to stand their ground. If you step away or let go, the client no longer has something to push back against (also called rolling with resistance).



### Slide 96: Five Strategies of Motivational Enhancement Therapy (MET)

Motivational Enhancement Therapy (MET) employs a variation of Motivational Interviewing (MI) to analyze and dissect feedback gained from client sessions. MI focuses on re-patterning client behavior that is the result of ambiguous and undefined thoughts. This form of therapy is presented in a direct and client targeted manner that strives to transform undesired behaviors. Motivational Enhancement Therapy was developed by William Miller and Stephen Rollnick. The goal of MET is to aid the client in clarifying his or her own perceptions and beliefs in order to direct him or her in a more decisive way. Most people who respond to this type of treatment have struggled for years in a mire of ambivalence and welcome the opportunity to have vision and focus in their lives.

MET is commonly used for the treatment of addictions, including abuse of alcohol and other substances. MET is administered in a receptive atmosphere that allows a client to receive feedback from the therapist for the purpose of fortifying the client's resolve for transformation and to empower the client with a feeling of self-control. Rather than engaging the client's defense mechanisms through confrontational discourse, the therapist works with the client to create positive affirmations and a sense of inner willingness to facilitate change. Once that is achieved, the client becomes receptive to the healing process and progresses toward wellness.

Clients who are faced with the challenge of substance abuse experience similar emotional and mental symptoms to rebellious adolescents, including resistance, narcissism, relational difficulties, and moodiness. MET has been proven to provide substantial relief from these symptoms and has been recognized as a useful tool for gaining control of these unwanted behavior patterns. MET can be applied to clients regardless of their commitment level and the course of treatment is usually brief. It has shown significant efficacy in clients who have previously demonstrated strong resistance to or weak motivation for change. It is particularly helpful to adolescents dealing with similar issues.

With regards to #1, one way to express empathy with adolescent clients is to use skillful reflections. An empathic style communicates respect for and acceptance of the client and his/her feelings; encourages a non-judgmental, collaborative relationship; allows you to be a supportive and knowledgeable consultant; sincerely compliments rather than denigrates; and listens rather than tells. With regards to #2, you can help your adolescent clients to see where they are currently, and where they want to be in the future. Motivation for change is enhanced when clients perceive discrepancies between their current situation and their hopes for the future. And with regards to #5, supporting a client's self-efficacy helps them to see that they have the skills and the ability to change.

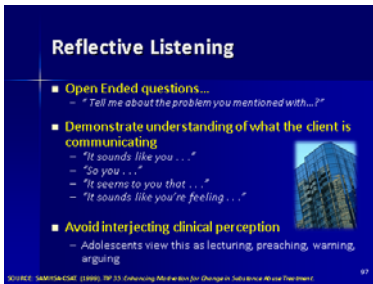
(Notes for Slide 96, continued)

**Slide 96: Five Strategies of Motivational Enhancement Therapy (MET)**



REFERENCE:

Center for Substance Abuse Treatment. (1999). *Enhancing Motivation for Change in Substance Abuse Treatment. Treatment Improvement Protocol (TIP) Series, No. 35.* HHS Publication No. (SMA) 13-4212. Rockville, MD: Substance Abuse and Mental Health Services Administration.



**Slide 97: Reflective Listening**

Reflective listening is an MI/MET micro-skill that clinicians can use to express empathy with adolescent clients. A variety of “levels” of a reflection can be achieved, including (1) a simple reflection; (2) an amplified reflection; and (3) a double-sided reflection. The goal of reflective listening is to reflect the underlying feeling of a client’s statement (what the client means), not the facts (what the client says).



**Facilitating the Risk/Reward Analysis**

- What to focus on:
  - Decisional balance scale
    - Elicit pros and cons of use and change
    - Emphasize client choice and responsibility
- Elicit self-motivational statements, and **summarize them** (they are hearing what they just said)

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**Slide 98: Facilitating the Risk/Reward Analysis**

In moving toward any decision, most people weigh the costs and benefits of the action being contemplated. In behavioral change focused on alcohol and/or drug use, these considerations are known as decisional balancing, a process of cognitively appraising or evaluating the “good” aspects of substance use – the reasons not to change (what they get out of the targeted behavior and what the cost is of the targeted behavior), and the “not-so-good” aspects – the reasons to change. At some point in the decision-making process, the decisional balance is redistributed, and a decision is made. The objective in moving a client toward positive change, of course, is to help that person recognize and weigh negative aspects of substance use so that the scale tips toward beneficial behavior change. This tool is particularly helpful with difficult-to-engage clients, especially if you begin with the functional elements of their substance use (“the good things about...”).

Four overall objectives exist in using a decisional balance exercise with clients. The intent of such exercises, which weigh substance use and change separately, is to: (1) accentuate or in a subtle manner make salient from the client’s perspective the costs of the client’s substance use; (2) lessen, when possible, the perceived rewards of substance use; (3) make the benefits of change apparent; and (4) identify and accentuate, if possible, potential obstacles to change.

In summary, here is the order of the questions, as featured in the image on this slide (you go clockwise from top left corner):

1. What are the good things about...?
2. What are the not-so-good things about...?
3. What are the not-so-good things about changing...?
4. What are the good things about changing...?

### How do you Avoid Arguing with an Adolescent?

- Resistance should be a cue to modify your approach
- Treat ambivalence (mixed feelings) as normal
- Bring the focus back on their concerns:
  - Elicit the client's perceptions of the problem and provide feedback



### Slide 99: How do you Avoid Arguing with an Adolescent?

Clinicians may be occasionally tempted to argue with an adolescent client who is unsure about changing or is unwilling to change., especially if the adolescent is hostile, defiant, or provocative. Trying to convince an adolescent that a problem exists or that change is needed, however, could precipitate even more resistance. If you try to prove a point, the client might predictably take the opposite side. An argument with an adolescent client can rapidly degenerate into a power struggle (or tug-of-war) and do not enhance motivation to change. Arguments are counterproductive; defending breeds defensiveness; resistance is a signal to change strategies; and labeling is unnecessary. Any time you see a client start to push back, it is time to switch strategies to try and tip the scale in favor of making a change.

Miller and Rollnick state that, “[T]here is no particular reason why the therapist should badger clients to accept a label, or exert great persuasive effort in this direction. Accusing clients of being in denial or resistant or addicted is more likely to increase their resistance than to instill motivation for change. We advocate starting with clients wherever they are, and altering their self-perceptions, not by arguing about labels, but through substantially more effective means (Miller & Rollnick, 1991, p. 59).”



#### REFERENCE:

Miller, W.R., & Rollnick, S. (1991). *Motivational Interviewing: Preparing People to Change Addictive Behavior*. New York: Guilford Press.

### Topics Covered during CYT's Supplemental CBT Sessions

1. Problem-Solving Skills
2. Anger Awareness
3. Anger Management
4. Communication Skills: Assertiveness and Criticism
5. Coping with Cravings
6. Managing Negative Moods
7. Managing Thoughts about Using

### Slide 100: Topics Covered during CYT's Supplemental CBT Sessions

CYT Volume 2 is a supplement to *Motivational Enhancement Therapy and Cognitive Behavioral Therapy for Adolescent Cannabis Users: 5 Sessions, Cannabis Youth Treatment (CYT) Series, Volume 1*, and presents a seven-session cognitive behavioral treatment (CBT7) approach designed especially for adolescent cannabis users. It addresses the implementation and evaluation of cognitive behavioral treatment for adolescent marijuana users as part of the Cannabis Youth Treatment Project: A Cooperative Agreement for Evaluating the Efficacy of Five Treatments for Adolescents With Self-Reported Marijuana Use and Problems Associated With Its Use.

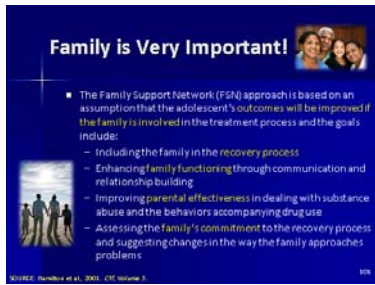
This slide features the topics covered during each of the supplemental CBT sessions. For each session, there are a rationale, guidelines for presenting coping skills, and activities for therapist modeling and client role-play. The outlines are not intended as a rigid structure but rather as scaffolding to help shape the therapy event into a learning opportunity. The CBT7 interventions follow a basic sequence, as given below:

1. Review of client status
2. Review of real life practice
3. Rationale for coping skill
4. Skill guidelines
5. Group exercise
6. Reminder sheets and real life practice exercises.



#### REFERENCE:

Webb, C., Scudder, M., Kaminer, Y., Kadden, R., & Tawfik, Z. (2002). *The Motivational Enhancement Therapy and Cognitive Behavioral Therapy Supplement: 7 Sessions of Cognitive Behavioral Therapy for Adolescent Cannabis Users. Cannabis Youth Treatment Series, Volume 2*. DHHS Pub. No. (SMA) 07-3954. Rockville, MD: Center for Substance Abuse Treatment, Substance Abuse and Mental Health Services Administration.



## Slide 101: Family is Very Important!

CYT Volume 3 features an intensive, family-focused approach designed to improve parenting skills and to increase family cohesion, closeness, and parental support. Presumably, improving these skills increases the likelihood of both initial and sustained change. The intervention consists of case management (to promote parent engagement in the treatment process), six parent education group meetings (to improve parent knowledge and skills relevant to adolescent problems and family functioning), four therapeutic home visits, and referral to self-help support groups. At least one parent or caregiver is required to attend group meetings. All family members living at home are invited to participate in home visits. Family therapy has been cited as a potentially valuable tool in the treatment of substance abuse. The family support network (FSN) intervention seeks to extend the focus of treatment beyond the world of the adolescent by engaging the family, a major system in his or her life. When working with adolescents, it is critical to engage in a conversation about the familial unit and support system. If the adolescent does not have a traditional family, you need to ask about their friends, teachers, and other relatives (aunts/uncles, etc.). Less family conflict and greater family cohesion correspond to reduced risk for poor treatment outcomes. Although families play a pivotal role, they sometimes vary in their ability and willingness to help. With hard to engage family members, clinicians should make it a priority to engage them to the maximum extent possible.



### REFERENCE:

Hamilton, N.L., Brantley, L.B., Tims, F.M., Angelovich, N., & McDougall, B. (2001). *Family Support Network for Adolescent Cannabis Users, Cannabis Youth Treatment (CYT) Series, Volume 3*. DHHS Pub. No. (SMA) 01-3488. Rockville, MD: Center for Substance Abuse Treatment, Substance Abuse and Mental Health Services Administration.

### Case Study



A 17-year-old Latino patient has come to your office for assistance. He discloses that he recently moved in with his older boyfriend in East Los Angeles. He has a history of using alcohol and prescription opioids, and admitted recently trying heroin for the first time. He states, "I am definitely NOT HIV+ because I don't hang out with those kind of people."

1. What additional information do you want to know?
2. What services are most important to begin his care?

### Slide 102: Case Study



**\*\*Allow up to 20 minutes for this activity\*\***

1. *Read the case study aloud.*
2. *Ask participants to break into pairs or small groups (depending on the size of the audience), and spend 5-10 minutes discussing the questions.*
3. *De-brief as a full group for 5-10 minutes. Ask for volunteers to briefly share responses to the two questions.*

**Potential discussion points for question #1 include:**

- *Has he ever been tested for HIV?*
- *With whom does he use alcohol and other drugs?*
- *Why did he move in with his boyfriend?*
- *What is his partner's HIV status?*
- *How did he administer heroin?*
- *Did he like heroin?*
- *What does he know about HIV?*

**Potential discussion points for question #2 include:**

- *Why is he here today?*
- *What is his motivation for behavior change?*
- *Does he have awareness of risky practices?*
- *Would he like safe sex education?*
- *Does he have any co-occurring mental health issues?*
- *What is his sexual orientation?*

**Approaches for Treating Adolescents**

- Family therapy
- Individual counseling
- Generic group counseling programs
- Cognitive behavioral therapy (CBT)
- Motivational interviewing/enhancement therapy (MET)
- MET + CBT (MET/CBT)
  - MET/CBT-5
  - MET/CBT-12 (this includes the 7 additional components)

SOURCE: Lippsey et al., 2010



**Slide 103: Approaches for Treating Adolescents**

Adolescents with substance abuse disorders differ from their adult counterparts in important ways, including motivations behind the abuse, access to substances, and frequency of use. But are substance abuse programs for adolescents addressing these differences? What types of treatment programs are the most effective for adolescents? To assess the effectiveness of treatment for adolescent substance abuse, this research project conducted a synthesis of research (meta-analysis) on studies of substance abuse treatment among adolescents. An additional meta-analysis was conducted on treatment outcomes reported on the Global Appraisal of Individual Needs (GAIN) database compiled by Chestnut Health Systems. The study was supported under an interagency agreement between the Substance Abuse and Mental Health Services Administration's Center for Substance Abuse Treatment, and the National Institute on Alcohol Abuse and Alcoholism.

The study sought to answer the following research questions: (1) How much change in substance use occurs after adolescents enter treatment programs? What treatment programs exhibit the largest pre-post changes in substance use outcomes? (2) After accounting for varying characteristics of studies, what treatment programs exhibit the largest effects on adolescent substance use? (3) How do the comparative effects of treatment types in the meta-analysis compare with those found in the national GAIN database?

The approaches listed on the slide are those that were featured in the studies included in the meta-analysis. Additional approaches (not featured on the slide) include psychoeducational therapy (PET), contingency management, vocational counseling, pharmacological therapies, drug court, and no treatment (assessment only) and delayed treatment control groups.



REFERENCE:

Lipsey, M.W., Tanner-Smith, E.E., & Wilson, S.J. (2010). *Comparative Effectiveness of Adolescent Substance Abuse Treatment: Three Meta-analyses With Implications for Practice*. Nashville, TN: Peabody Research Institute, Vanderbilt University.

### Meta-Analysis Results

- Effect sizes were close and not statistically meaningful to make definitive statements about superiority...BUT
  - Family therapy & CBT/MET combo had stronger effects (on abstinence outcomes) than all compared treatment conditions
  - Individual counseling was less effective than all other treatment conditions with which it was compared

WORLD (Lipsey et al., 2002)

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### Slide 104: Meta-Analysis Results

The Lipsey et al. meta-analysis of various treatment modalities was conducted to determine which programs yield the best adolescent outcomes. In their analysis, they compared 55 research studies of various therapeutic approaches that were tested against a control or alternate treatment sample. Although most of the studies reviewed in the meta-analysis were conducted roughly a decade ago, the Lipsey et al. review is highly regarded as a thorough and statistically sound evaluation of adolescent treatment programs.

The Lipsey et al. review focused on these approaches: 12-step-based therapy, TC, family-based interventions, CBT, motivational-based therapy (MI and BI), and mixed or other approaches. A consistent pattern emerged that showed overall positive effects for all treatment models when compared with comparison conditions, but family therapy, CBT, and motivational enhancement therapy/CBT tended to show the best outcomes. It is advisable, however, to view these findings with caution given the relatively small number of studies and the fact that many studies' efforts to control for confounds were not optimal.

### What is the Clinical Adherence to Evidence-Based Practices?

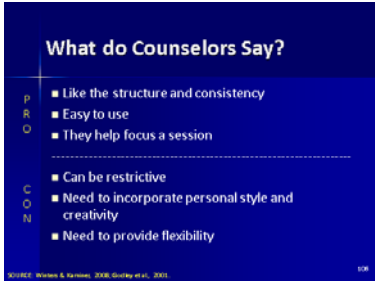


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### Slide 105 [Transition Slide]: What is the Clinical Adherence to Evidence-Based Practices?

The next portion of the presentation briefly reviews the evidence available to describe the clinical adherence to evidence-based practices for treating adolescent substance users.

Photo credit: SAMHSA, 2014 (BH Barometer Report).



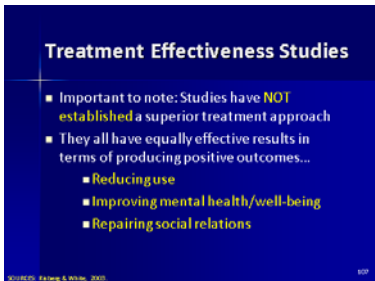
### Slide 106: What do Counselors Say?

To learn an evidence-based treatment well, clinicians need to be receptive to the new approach, and have beliefs, orientations, and core counseling skills that are consistent with the new treatment. This slide features counselors perspectives on the adoption of an evidence-based practice, including a few pros and cons.



#### REFERENCE:

Winters, K.C., & Kaminer, Y. (2008). Screening and assessing adolescent substance use disorders in clinical populations. *Journal of the American Academy of Child and Adolescent Psychiatry, 47*(7), 740-744.



### Slide 107: Treatment Effectiveness Studies

It is important to note that a superior treatment approach for adolescents has yet to be established. That said, studies that have looked at treatment effectiveness have produced positive outcomes related to reductions in substance use, improvement in mental health and general well-being, and an improvement in social relationships. Viewed as a whole, the most common outcomes of adolescent treatment are enhancements in global functioning (increased emotional health and improved functioning in the family, school, and community) and reduced substance use (to approximately 50% of pre-treatment levels) rather than complete and enduring cessation of alcohol and other drug use.



#### REFERENCE:

Risberg, R. & White, W. (2003) Adolescent substance abuse treatment: Expectations versus outcomes. *Student Assistance Journal, 15*(2), 16-20.



### Treatment Outcome Studies

- Although treatment is working...
  - Less than half of adolescents leave treatment with a positive discharge (still using)
  - Relapse continues to be fairly common: ~65% relapse during first three months after treatment completion, and longer-term (12+ months)

© 2008, Rosenbaum et al., 2011, O'Connell, 2006, Morral et al., 2006

### Slide 108: Treatment Outcome Studies

With regards to treatment outcome studies, more work is left to do. Less than 50% of adolescents leave treatment with a positive discharge (meaning, they are still using), and almost two-thirds of adolescents relapse within three months of treatment completion. Adolescent treatment programs with the best clinical outcomes are those that treat a larger number of adolescents; have a sufficient budget; use evidence-based therapies; offer specialized educational, vocational, and psychiatric services; employ counselors with experience working with adolescents; and offer a larger menu of youth-specific services (e.g., art therapy, recreational services).



#### REFERENCES:

1. Patnode, C.D., O'Connor, E., Rowland, M., Burda, B.U., Perdue, L. A., & Whitlock, E. P. (2013). Primary care behavioral interventions to prevent or reduce illicit drug and nonmedical pharmaceutical use in children and adolescents: A systematic evidence review for the U.S. Preventive Services Task Force. *Evidence Synthesis No. 106*. Rockville, MD: Agency for Healthcare Research and Quality.
2. Deas, D. (2008). Evidence-Based Treatments for Alcohol Use Disorders in Adolescents. *Pediatrics*, 121(Supplement 4), S348-S354.
3. Morral, A.R., McCaffrey, D.F., Rideway, G., Mukherji, A., Beighley, C. (2006). The Relative Effectiveness of 10 Adolescent Substance Abuse Treatment Programs in the United States. Santa Monica, CA: Rand Corporation. Available at: [http://www.rand.org/pubs/technical\\_reports/TR346.html](http://www.rand.org/pubs/technical_reports/TR346.html).

### The Case for Continuity of Care

- Lack of continuity of care: **less than 10%** participate in aftercare after formal treatment
- It's called many things:
  - Aftercare
  - Continuing Care
  - Disease Management
  - Recovery Check-Ups
  - Stepped Down Care



### Slide 109: The Case for Continuity of Care

Ongoing care, meaning the provision of services after completion of active treatment, is essential for substance using adolescents. In reality, however, fewer than 1 in 10 adolescents participate in aftercare after formal treatment. Many adolescents are balanced between recovery and relapse in the months following treatment. The period of greatest vulnerability for relapse is in the first 30 days following treatment; the adolescents' status at 90 days following treatment is highly predictive of their status at one year following treatment. The stability of recovery is enhanced by post-treatment monitoring and periodic recovery checkups. Effective continuing care is characterized by sustained continuity of contact and support, and assumption of responsibility for such contact by the service professional rather than the adolescent. The adolescent's post-treatment peer adjustment is a major determinant of treatment outcome. The post-treatment home environment also plays a significant role in recovery/relapse outcomes. Recovery mutual aid networks (AA, NA, etc.) can offer considerable support for long-term recovery, but they suffer from low teen participation rates and their effect is dependent upon intensity and duration of participation.

### Empirical Support for Continuing Care

- Evidence suggests clients who get continuing care have **better outcomes** than clients who do not receive continuing care services.
- Evidence mainly established for adults; **less clear for adolescents**
- Very few continuing care studies of adolescents in the scientific literature
  - **Home visits** with youth after residential treatment (Assertive Continuing Care)

© 2010 Lesh et al., 2011; Roizen et al., 2010; Gossop et al., 2008

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### Slide 110: Empirical Support for Continuing Care

Continuing care promotes the gains made during initial treatment for alcohol and drug dependence and increases an individual's chances of long-term abstinence. Several strategies, ranging from attendance reminders and incentives to at-home visits, have been shown to increase engagement in ongoing care. In general, continuing care is related to long-term improvement of substance use outcomes following treatment. Despite their effectiveness in managing substance use disorders, continuing care programs have limitations. These limitations include insufficient scheduling flexibility, limited treatment options, lack of patient anonymity, and the cost and time needed to effectively carry out continuing care interventions.



#### REFERENCES:

1. Lash, S.J., Timko, C., Curran, G.M., McKay, J.R., & Burden, J.L. (2011). Implementation of evidence-based substance use disorder continuing care interventions. *Psychology of Addictive Behaviors, 25*, 238-51.
2. Roizen, H.G., de Waart, R., & van der Kroft, P. (2010). Community reinforcement and family training: an effective option to engage treatment-resistant substance-abusing individuals in treatment. *Addiction, 105*, 1729-38.
3. Gossop, M., Stewart, D., & Marsden, J. (2008). Attendance at Narcotics Anonymous and Alcoholics Anonymous meetings, frequency of attendance and substance use outcomes after residential treatment for drug dependence: A 5-year follow-up study. *Addiction, 103*, 119-25.




**Slide 111 [Transition Slide]: Strategies to Prevent Substance Abuse and HIV among Youth**

Age-appropriate HIV prevention education should occur through parents, schools, and community and web-based programs is critical. Youth should be taught early about HIV prevention with information they can understand and use. This includes education about risks and skills to help delay sex and prevent HIV infection. Youth can reduce their risk of HIV infection by choosing to stop having sex. They can also limit their number of sex partners, refrain from having sex while under the influence of alcohol or drugs, and use a condom every time they have sex. Youth need to be tested and know where to get a confidential HIV test. Testing is the first step to getting medical care and treatment that can improve health, save lives, and prevent the spread of HIV.

The Office of Adolescent Health (OAH), with funding from the Secretary's Minority AIDS Initiative Fund, supports the National Resource Center for HIV/AIDS Prevention among Adolescents. The Center operates under a competitively-awarded cooperative agreement with the Francois-Xavier Bagnoud Center, School of Nursing, University of Medicine and Dentistry of New Jersey (UMDNJ). UMDNJ has partnered with the University of California - San Francisco's Center for HIV Information and the National Network of STD/HIV Prevention Training Centers, experts in the field of HIV/AIDS care and prevention, to extend the Center's reach. Launched in 2012, the Center supports adolescent service providers (i.e. an organization that works with teens or an individual, such as a community health education specialist or a clinician) by providing web-based resources, evidence-based program information, and links to training and technical assistance to help prevent HIV/AIDS among adolescents, in particular adolescents from minority and high-risk populations.

For more information, visit: <http://www.hhs.gov/ash/oah/oah-initiatives/national-resource-center.html>.

Photo credit: HHS, OAH website, February 2014.

**HIV Prevention Strategies** 

- Action is required at individual, service provider, and community level for effective behavior change
  - **Individuals:** If under 21, do not drink alcohol; if 21 or older, drink responsibly; be a good role model; seek help to quit
  - **Service Providers:** Identify substance abuse problems early through regular screening, brief intervention, and referral to further treatment if needed; provide a conducive environment, listen and look out for cues from clients

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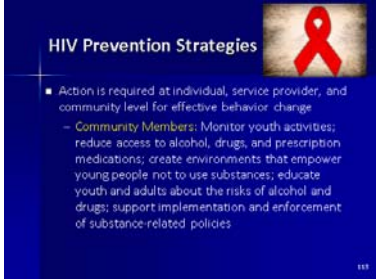
### Slide 112: HIV Prevention Strategies

Behavioral interventions for HIV prevention should address the link between substance use and HIV/STD by focusing on high-risk sexual behaviors that are consequences of substance drug use, most commonly alcohol consumption. The focus for HIV prevention has been on effective interventions such as condom use, testing and counseling, pre- and post-exposure prophylaxis (preventive medicine), male circumcision, needle exchange services to reduce needle sharing that may lead to HIV transmission for injecting drug users. However, there is need to pay more attention now to preventing and treating non-injectable drug use including alcohol, which can interfere with these efforts, impairing people’s judgment and making them less likely to use protection during sex. Preventing and treating substance use can reduce the incidence of substance induced high-risk sexual behaviors and subsequently reduce HIV transmission.



#### REFERENCE:

Drug Abuse and HIV/AIDS: The Role of Alcohol. Published on May 3, 2012. Available at: <http://www.drugs.indiana.edu/drug-info/featured-articles/157-drug-abuse-and-hiv-aids-the-role-of-alcohol>.



**HIV Prevention Strategies**

- Action is required at individual, service provider, and community level for effective behavior change
  - Community Members:** Monitor youth activities; reduce access to alcohol, drugs, and prescription medications; create environments that empower young people not to use substances; educate youth and adults about the risks of alcohol and drugs; support implementation and enforcement of substance-related policies

**Slide 113: HIV Prevention Strategies**

Behavioral interventions for HIV prevention should address the link between substance use and HIV/STD by focusing on high-risk sexual behaviors that are consequences of substance drug use, most commonly alcohol consumption. The focus for HIV prevention has been on effective interventions such as condom use, testing and counseling, pre- and post-exposure prophylaxis (preventive medicine), male circumcision, needle exchange services to reduce needle sharing that may lead to HIV transmission for injecting drug users. However, there is need to pay more attention now to preventing and treating non-injectable drug use including alcohol, which can interfere with these efforts, impairing people’s judgment and making them less likely to use protection during sex. Preventing and treating substance use can reduce the incidence of substance induced high-risk sexual behaviors and subsequently reduce HIV transmission.



REFERENCE:

Drug Abuse and HIV/AIDS: The Role of Alcohol. Published on May 3, 2012. Available at: <http://www.drugs.indiana.edu/drug-info/featured-articles/157-drug-abuse-and-hivaids-the-role-of-alcohol>.

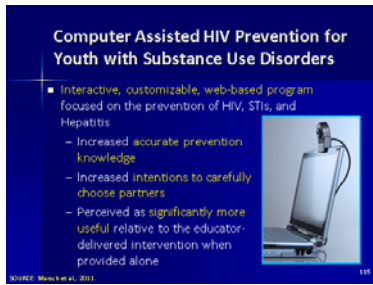


**Addressing Substance Abuse through Technology**

- Youth spend a lot of time interacting with modern technology tools (smart phones, iPads, laptops, etc.)
- Treatment Research Institute is planning to implement SBIRT with high school students in NYC
  - A unique, computerized screening tool will engage adolescents through gaming graphics and videos
  - Screening experience will be followed by a voluntary, brief counseling session

**Slide 114: Addressing Substance Abuse through Technology**

The TRI study is funded by the Conrad N. Hilton Foundation and involves a clinical partnership with Phoenix House Foundation. The tailored content and characters will provide the high school-aged individuals a chance to self-identify with things such as language preference, ethnicity, gender, and weight. The use of computerized learning has been proven effective in promoting a safe place to disclose personal health information without judgment. Tailoring materials using technology has been successful with topics such as teenage pregnancy prevention, STD/HIV prevention, and smoking cessation.



### Slide 115: Computer Assisted HIV Prevention for Youth with Substance Use Disorders

Marsch and colleagues developed an interactive\*\*, customizable, web-based program focused on the prevention of HIV, sexually transmitted infections, and hepatitis among youth. Results from a randomized, controlled trial with youth in treatment for substance use demonstrated that this web-based tool, when provided as an adjunct to an educator-delivered prevention intervention, increased accurate prevention knowledge, increased intentions to carefully choose partners, and was perceived as significantly more useful relative to the educator-delivered intervention when provided alone. Results suggest this Web-based program may be effective and engaging and may increase the adoption of effective HIV and disease prevention science for youth.

**\*\*Therapeutic Education System (TES):** TES is an interactive, web-based program theoretically grounded in the evidence-based Community Reinforcement Approach (CRA) to behavior therapy. TES is composed of interactive, multimedia modules, including those focused on cognitive behavioral skills training (e.g., effective strategies for refusing drugs, managing thoughts about drug use, functional analysis/self-management planning, etc.). TES also includes modules to prevent HIV, hepatitis, and sexually transmitted infections (STIs). Additional modules teach skills to improve psychosocial functioning (e.g., family/social relations, managing negative moods, etc). TES is a self-directed program that includes a module teaching patients how to use the system and a "customization program" to build an individualized treatment plan for patients. Link for further information: [www.sudtech.org](http://www.sudtech.org).



#### REFERENCE:

Marsch, L.A., Grabinski, M.J., Bickel, W.K., Desrosiers, A., Guarino, H., Muehlbach, B., Solkhah, R., Tafigue, S., & Acosta, M. (2011). Computer-assisted HIV prevention for youth with substance use disorders. *Substance Use and Misuse*, 46(1), 46-56.

#### Adolescent Medicine Trials Network for HIV/AIDS Interventions

- Research aimed at preventing HIV infection among at-risk youth between the ages of 12 and 24
- **Healthy Choices:** A multi-site clinical trial examining the efficacy of a motivational intervention for reducing high-risk sexual behavior and substance use among youth with HIV

#### Slide 116: Adolescent Medicine Trials Network for HIV/AIDS Interventions

The primary mission of the Adolescent Medicine Trials Network (ATN) for HIV/AIDS Interventions is to conduct research, both independently and in collaboration with existing research networks.

In one ATN study, Dr. Debra Murphy (UCLA ISAP) and colleagues studied Healthy Choices, a motivational interviewing intervention targeting multiple risk behaviors among HIV-positive youth. This study investigated the effects of this intervention program specifically on alcohol and marijuana use. Youth living with HIV ( $n=143$ , mean age=20.7, 51.5% male) were recruited from four sites in the United States, and randomly assigned to intervention or control conditions. The four-session intervention focused on two of three possible problem behaviors based on entry screening; this study focused on 143 HIV-positive youth who received the intervention for substance use. At 15-month follow-up past-week alcohol use was significantly lower for intervention youth than control youth (39.7% versus 53.6%,  $\chi^2=2.81$ ,  $0.05 < p < 0.01$ ); developmental trajectory analysis demonstrated significant reductions in alcohol use, but more importantly the intervention was effective over time in significantly reducing the adolescent's probability of being classified into the high-risk trajectory group. The intervention was less effective in reducing marijuana use.



#### FEATURED RESOURCES AND REFERENCES:

1. [www.adolescentaids.org](http://www.adolescentaids.org) – A resource to the adolescents who have AIDS or are at-risk for it.
2. <http://www.p2ponline.org> – Educating and counseling for the prevention of HIV/AIDS.
3. Murphy, D.A., Chen, X., Naar-King, S., Parsons, J.T., & the ATN. (2012). Alcohol and Marijuana Use Outcomes in the Healthy Choices Motivational Interviewing Intervention for HIV-positive Youth. *AIDS Patient Care STDs*, 26(2), 95-100.
4. Naar-King, S., Lam, P., Wright, K., and the ATN. (2007). *Recruitment and Retention in Healthy Choices: A Motivational Intervention (MI) for HIV+ Youth*. Poster presented at the Annual Meeting of the Society for Adolescent Medicine, Denver, Colorado. Abstract No. 49.



### Hip-Hop 2 Prevent Substance Abuse and HIV (H2P)

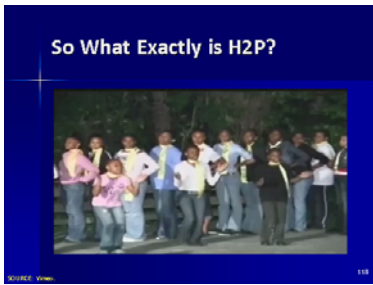
- Designed to improve knowledge and skills related to drugs and HIV/AIDS among youth ages 12-16
- Aim of preventing or reducing their substance use and risky sexual activity
- Program incorporates aspects of hip-hop culture as a framework for addressing substance use and HIV risk behaviors

SOURCE: SAMHSA, NIDA, 2009, accessed February 2014

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### Slide 117: Hip-Hop 2 Prevent Substance Abuse and HIV (H2P)

The aspects of hip-hop culture include language, arts, and history. H2P uses a curriculum consisting of 10 modules, called "ciphers," delivered in 10 2-hour sessions. Through the curriculum's use of hip-hop culture, an interactive, multimedia CD, and a mix of traditional teaching methods, students learn information about drugs, HIV/AIDS, and sexual behavior; resistance and refusal skills; effective communication and negotiation skills; information about healthy alternatives to sex and drugs; and prevention self-efficacy skills. School staff (e.g., teachers, counselors) delivers the first four modules in after-school or in-school sessions and the remaining modules at H2P camp, a 3-day retreat offering students structured learning and recreational activities, team-building experiences, mentoring, and opportunities for creative expression. Prior to serving as instructors, school staff participates in a 1-day training to learn about the genesis, ideology, and cultural components of hip-hop.



### Slide 118: So What Exactly is H2P?

The estimated cost of implementing the intervention with 75 students is \$64,700. This estimate includes a part-time program manager (\$27,000) and part-time program assistant (\$10,000); 2 instructors for every 25 students (\$9,900 for 6 instructors); marketing (\$3,000); supplies (\$600); and costs for the camp, including program staff (\$6,000), the facility (\$3,200), and food (\$5,000).

#### To learn more about implementation, contact:

Sylvia L. Quinton, Esq., (410) 295-7177, [SylviaQuinton@me.com](mailto:SylviaQuinton@me.com)

#### To learn more about research, contact:

Warren A. Rhodes, Ph.D., (302) 736-1671, [warhodes@yahoo.com](mailto:warhodes@yahoo.com)



***\*\*How to Insert the Video: This slide will contain a short video clip that will play when the trainer clicks on the static image. In order for this to work, the video needs to be inserted into the presentation. You can access the video from the package of training materials that is posted to the PSATTC Products and Resources page ([www.psattc.org](http://www.psattc.org)). From the INSERT menu in PowerPoint, select "video (or movie)." Select the "H2P" video file. When prompted, indicate that the movie should play automatically and full screen. Once the video is inserted into the PowerPoint presentation, you need to maintain a direct connection between the PowerPoint presentation and the video file. When moving the PowerPoint file to another location on your computer or to another computer, make sure to always move the "H2P" video file along with it. If the link becomes broken, the video will need to be reinserted.***

***To play the video, hover over the video image to make the video controls appear. Click on the play button. The video should display full screen.***



### Slide 119: UFO Model (UCSF) for Hepatitis C Prevention among Young IDUs

The UFO Model was established in 1996 and includes a series of community-based research studies of HIV, Hepatitis B, and Hepatitis C, health consequences of drug use, vaccine feasibility and adherence in young adult injectors in San Francisco. Features of the UFO Model include: cultural competency/non-judgment; youth-centered focus; outreach and consistency; and collaboration and referrals. Core components include: outreach and education; youth-centered referrals; drop-in center; syringe access; HCV testing and HAV/HBV vaccination; and education and support groups. The core HCV prevention message is: (1) Do not share needles or injecting equipment (e.g., cookers, cottons, water, tourniquets); always use your own stuff and use it ONCE; and use “a new kit for every hit.” Additional prevention messages include: (1) get tested for Hepatitis C; (2) know the status of your injecting partners; (3) teach your injection partners how to be safe; (4) if someone else injects you, make sure they inject you first and themselves second; (5) avoid sharing tattoo equipment, razors, and nail clippers; and (6) get vaccinated against Hepatitis A and Hepatitis B.




#### REFERENCE:

University of California San Francisco, Center for AIDS Prevention Studies.  
Additional information available at: <http://caps.ucsf.edu/ufo-study/>.

**Take Home Points for Clinicians**

- **Know** - your local resources (substance use disorders treatment facilities, 12-step meetings, mental health resources, etc.)
- **Engage** - screen youth for risky substance use and practice ways to communicate effectively with young patients.
- **Remember** - substance use is treatable and every clinic visit is an opportunity for intervention and prevention messages.
- **Encourage** - Young patients and staff to discuss the challenges of substance use and remind them of the importance of continued HIV care, if applicable.



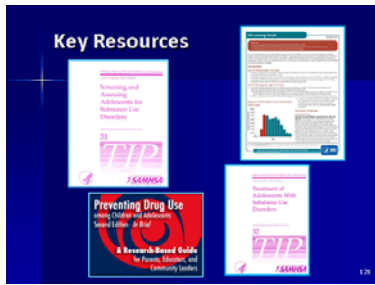
**Slide 120: Take Home Points for Clinicians**

It is important to be familiar with local resources, including substance use disorders treatment facilities, 12-step meetings, and mental health resources. Alcohol abuse impacts the user’s brain and body, but can be treated. Continue to dialogue with patients about their alcohol use and the importance of continued HIV care.

**Additional Information for the Trainer(s)**

Alcohol-dependent patients should be referred to treatment programs. HIV clinicians should be familiar with local resources for substance-abuse treatment and related psychiatric care, including inpatient or residential treatment, outpatient treatment, and support groups such as Alcoholics Anonymous. In addition, clinicians should assess for potential withdrawal symptoms. Clinicians should also consider the use of pharmacotherapy in dependent individuals. Medications are available that target neurotransmitters involved in the reinforcing effects of alcohol use. Pharmacotherapy for alcohol dependence in combination with behavioral counseling can reduce relapse and help maintain abstinence. HIV clinics offer a number of advantages as a site for alcohol pharmacotherapy. These clinics are involved in long-term patient care, are generally characterized by integration of a variety of specialty services (e.g., psychiatric and OB/GYN services), and have access to funding for prescription medications. Further, many HIV clinics use intensive case management models that promote outreach to and retention of patients who are often challenging to treat. However, currently there are no data on pharmacotherapy for alcohol dependence in patients with HIV infection, although a number of trials are under way. Further, pharmacotherapy for dependence has shown only modest efficacy in clinical trials.

Other things clinicians can do include: (1) offer patients an HIV test as a regular part of medical care; (2) offer patients STD testing and treatment services; (3) engage patients in HIV treatment and make sure the amount of virus is as low as possible; (4) engage and encourage people with HIV continue getting HIV medical care; (5) provide HIV prevention counseling to patients on how to protect their health and avoid passing the virus on to others; and (6) refer to other prevention services (for example, partner counseling) as needed.



**Slide 121: Key Resources**

This slide features a few important resource documents that have been produced that focus on substance use and/or HIV among adolescents and young adults. The featured resources are available free of charge from federal sources.

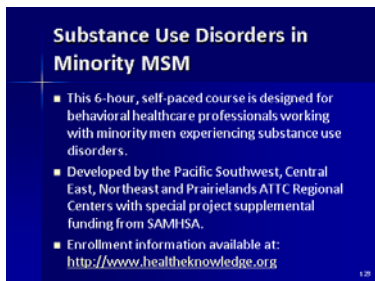
(The images are hyperlinked when in slideshow view).



**Slide 122: HIV/Substance Use Websites Targeted to Youth**

This slide features a few websites that are geared specifically towards youth, and discuss HIV and drug abuse.

(The images are hyperlinked when in slideshow view).



**Slide 123: Substance Use Disorders in Minority MSM**

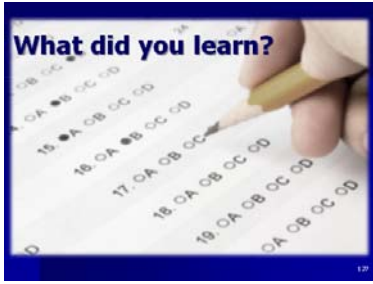
The Substance Abuse and Mental Health Services Administration’s (SAMHSA) Center for Substance Abuse Treatment (CSAT) received funding through the Minority AIDS Initiative in 2008 to develop an online curriculum on the substance use disorders treatment and HIV/AIDS prevention/ intervention needs of minority men who have sex with men (MSM). The purpose of the curriculum is to provide awareness and knowledge that will enable addiction treatment providers to more effectively meet the needs of culturally specific subpopulations of HIV-positive, substance abusing MSM or those at risk for HIV/AIDS. CSAT has invited four regional ATTCs, including the PSATTC, to apply for a special project supplemental award to each develop one of the four online, self-paced training manuals.

<p><b>Resources &amp; Local Referrals</b></p> <ul style="list-style-type: none"> <li>▪ <b>Los Angeles County STD Clinic and Schedules</b> Find out where to get free, confidential STD testing/treatment.</li> <li>▪ <b>inSPOT.org</b> Includes an interactive STD clinic finder map for the U.S., Canada, Puerto Rico, American Samoa, Commonwealth of the Northern Mariana Islands, Guam, and Peru.</li> <li>▪ <b>SPECTRUM</b> A Charles R. Drew University-affiliated mental health center in the Watts/Willowbrook areas of South Los Angeles; provides comprehensive mental health services to individuals living with HIV/AIDS and their significant others/family members, including youth and young adults. For more information call (323) 563-4939.</li> </ul>	<p><b>Slide 124: Resources &amp; Local Resources</b></p>
<p><b>Resources &amp; Local Referrals</b></p> <ul style="list-style-type: none"> <li>▪ <b>AIDS Healthcare Foundation (AHF) Men's Wellness Center</b> The AHF Men's Wellness Center is dedicated to providing sexual health services to men in LA County, including gay and bisexual men and male to female transgender clients.</li> <li>▪ <b>LA Gay and Lesbian (GLC) Center Sexual Health Program</b> The L.A. Gay &amp; Lesbian Center Sexual Health Program offers free sexually transmitted disease screening, treatment and education specifically for the gay, lesbian, bisexual and transgender community (though everyone is welcome).</li> </ul>	<p><b>Slide 125: Resources &amp; Local Referrals</b></p>
<p><b>Resources &amp; Local Referrals</b></p> <ul style="list-style-type: none"> <li>▪ <b>HIVcare.org</b> – Provides addresses of free HIV testing sites</li> <li>▪ <b>FreeHIVtest.net</b> – Provides free HIV tests at AHF centers and <i>Out of the Closet</i> stores</li> <li>▪ <b>plannedparenthood.org/los-angeles</b> – Search for testing sites by zip code; info about STDs/HIV</li> <li>▪ <b>California HIV/AIDS Service Referrals</b> – <a href="http://cdanpin.org/ca/">http://cdanpin.org/ca/</a></li> <li>▪ <b>aidshotline.org (check website)</b> 800-367-AIDS; 9 AM to 9 PM weekdays and 10 AM to 6 PM on weekends</li> </ul>	<p><b>Slide 126: Resources &amp; Local Referrals</b></p>

This slide features resources and local referrals.

This slide features resources and local referrals.

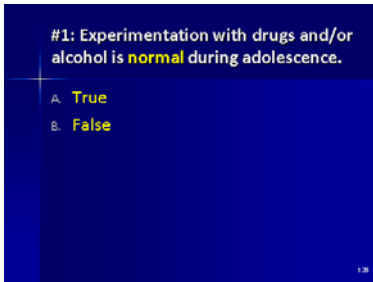
This slide features resources and local referrals.



### Slide 127: What did you learn?



*The purpose of the following five questions is to test the post-training knowledge as it relates to the topic of Youth, Substance Abuse, and HIV. The five questions are formatted as either multiple choice or true/false questions. Read each question and the possible responses aloud, and give training participants time to jot down their response before moving on to the next question. Reveal the correct answer to each question.*



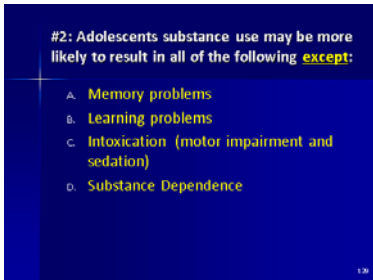
### Slide 128: What did you learn Question #1

**Answer Key:**

Correct response: **B (False)**



\*\*Audience Response System (ARS)-compatible slide



### Slide 129: What did you learn Question #2

**Answer Key:**

Correct response: **C (Intoxication [motor impairment and sedation])**



\*\*Audience Response System (ARS)-compatible slide

#3: Who has the **higher rates of current alcohol use** among youth aged 12-17?

- A. Females
- B. Males
- C. Rates are equal

**Slide 130: What did you learn Question #3**

**Answer Key:**

Correct response: A (**Females**)



\*\*Audience Response System (ARS)-compatible slide

#4: Among females who are at risk for or are HIV+, all of the following variables predict substance abuse **except** being:

- A. Younger
- B. HIV positive
- C. Homeless
- D. Involved in the criminal justice system
- E. Positive for an STD
- F. Involved in survival sex
- G. Engaged in risky sex

**Slide 131: What did you learn Question #4**

**Answer Key:**

Correct response: E (**Positive for an STD**)



\*\*Audience Response System (ARS)-compatible slide

#5: Because of the relatively short duration of use, data suggests that the **best intervention strategy** for opioid using youth is immediate medical withdrawal followed by supportive counseling.

- A. True
- B. False

**Slide 132: What did you learn Question #5**

**Answer Key:**

Correct response: B (**False**)



\*\*Audience Response System (ARS)-compatible slide

**Thank you for your time!**

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 Pacific Southwest ATTC: [www.psattc.org](http://www.psattc.org)  
 PAETC Training calendar: [www.HIVtrainingCDU.org](http://www.HIVtrainingCDU.org)

**Slide 133: Final Slide**

This concludes the presentation. Thank the participants for their time and address any last-minute questions about the content. Encourage participants to reach out to the Pacific Southwest ATTC or Pacific AETC, should they have questions or concerns following the training session.



## **Acknowledgements**

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**PARTICIPANT HANDOUT #1: BLANK CRAFT**

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