

# MSM, Methamphetamines, & HIV



ATTC

Addiction Technology Transfer Center Network  
Funded by Substance Abuse and Mental Health Services Administration

# Sources



This course has combined the supplemental module, *Methamphetamine Use and HIV among Men Who Have Sex with Men*, written by Holly Ireland, Mary McCarty-Arias, & Jaye Yarbrough, with the ATTC Stimulant 101 National Core Curriculum Training Package entitled: *Stimulants & their Impact on Brain & Behavior: Best Practices & Approaches for Effective Treatment & Recover*, developed in 2020.

# Disclaimer

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Northeast & Caribbean (HHS Region 2)

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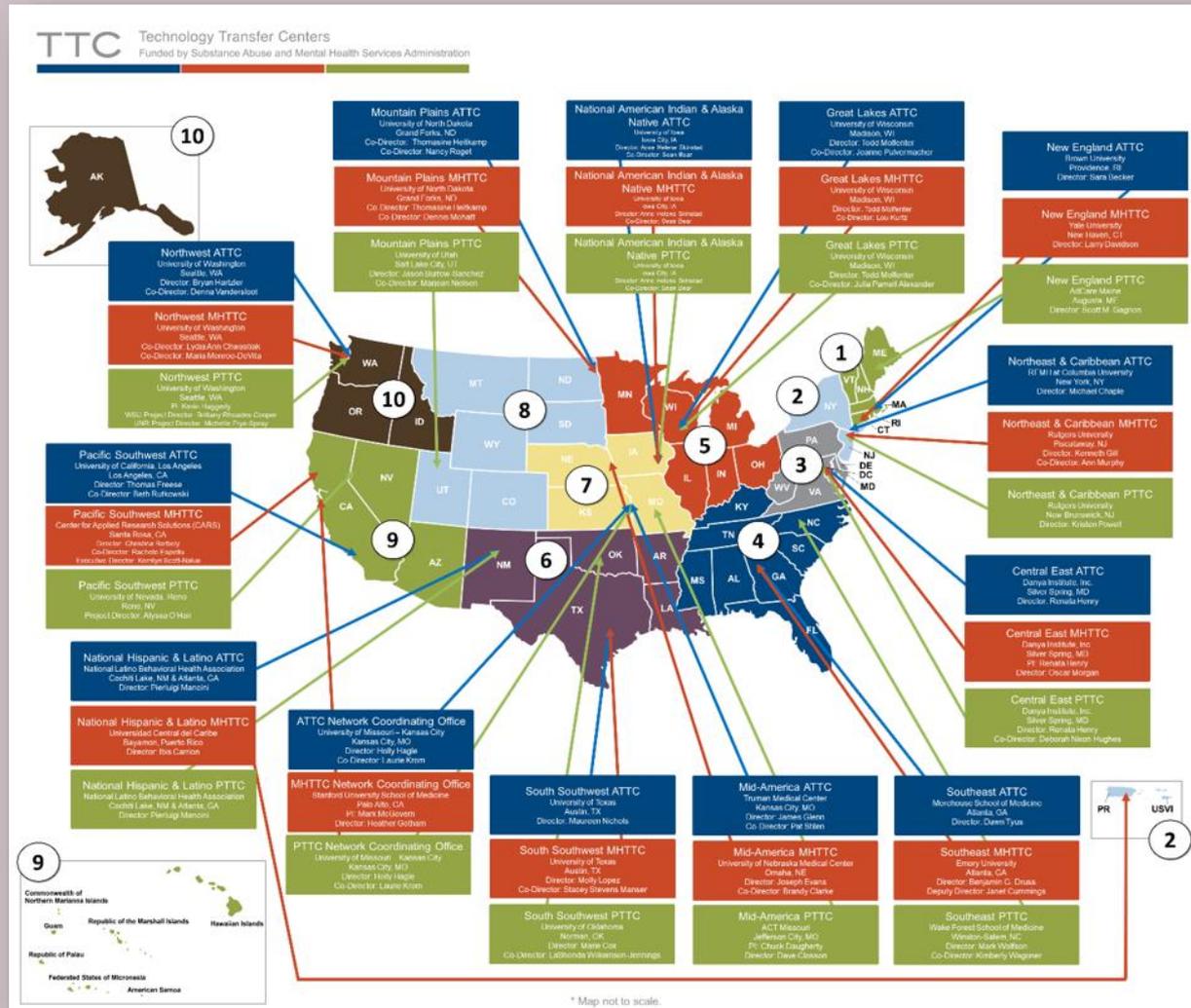


# About the ATTC Network



- **The ATTC Network is an international, multidisciplinary resource for professionals in the addictions treatment and recovery services field.**
- Established in 1993 by the Substance Abuse and Mental Health Services Administration (SAMHSA), the ATTC Network is comprised of 10 U.S.-based Centers, 6 International HIV Centers (funded by PEPFAR), 2 National Focus Area Centers, and a Network Coordinating Office.
- Together the Network serves the 50 U.S. states, the District of Columbia, Puerto Rico, the U.S. Virgin Islands, and the Pacific Islands of Guam, American Samoa, Palau, the Marshall Islands, Micronesia, and the Mariana Islands. The International HIV ATTCs serve Vietnam, Southeast Asia, South Africa, and Ukraine.

# The U.S.-Based TTC Network



\* Map not to scale

# Mary McCarty-Arias, M.A.

More than 25 years experience training in co-occurring disorders, HIV, and vocational rehabilitation.



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# ATTC Stimulant Workgroup Members



## Co-Chairs

- Thomas E. Freese, Region 9
- Jeanne Pulvermacher, Region 5
- Beth A. Rutkowski, Region 9

## Members

- James Campbell, Region 4
- Bryan Hartzler, Region 10
- Holly Ireland, Region 3
- Laurie Krom, Lena Marceno, and Viannella Halsall, ATTC NCO
- Mary McCarty-Arias, Region 2
- Maureen Nichols, Region 6
- Nancy Roget, Region 8

# Stimulant 101 National Curriculum



- Core Daylong Curriculum
- Culture Modules
  - African American Population
  - American Indian/Alaska Native Population
  - Latinx Population
- Supplemental Modules
  - Child welfare issues
  - gender differences
  - stimulant use in the context of polysubstance use
  - rural vs. urban differences
  - stimulants and HIV
  - recovery approaches

# Person-Centered Language

The use of affirming language inspires hope and advances recovery.

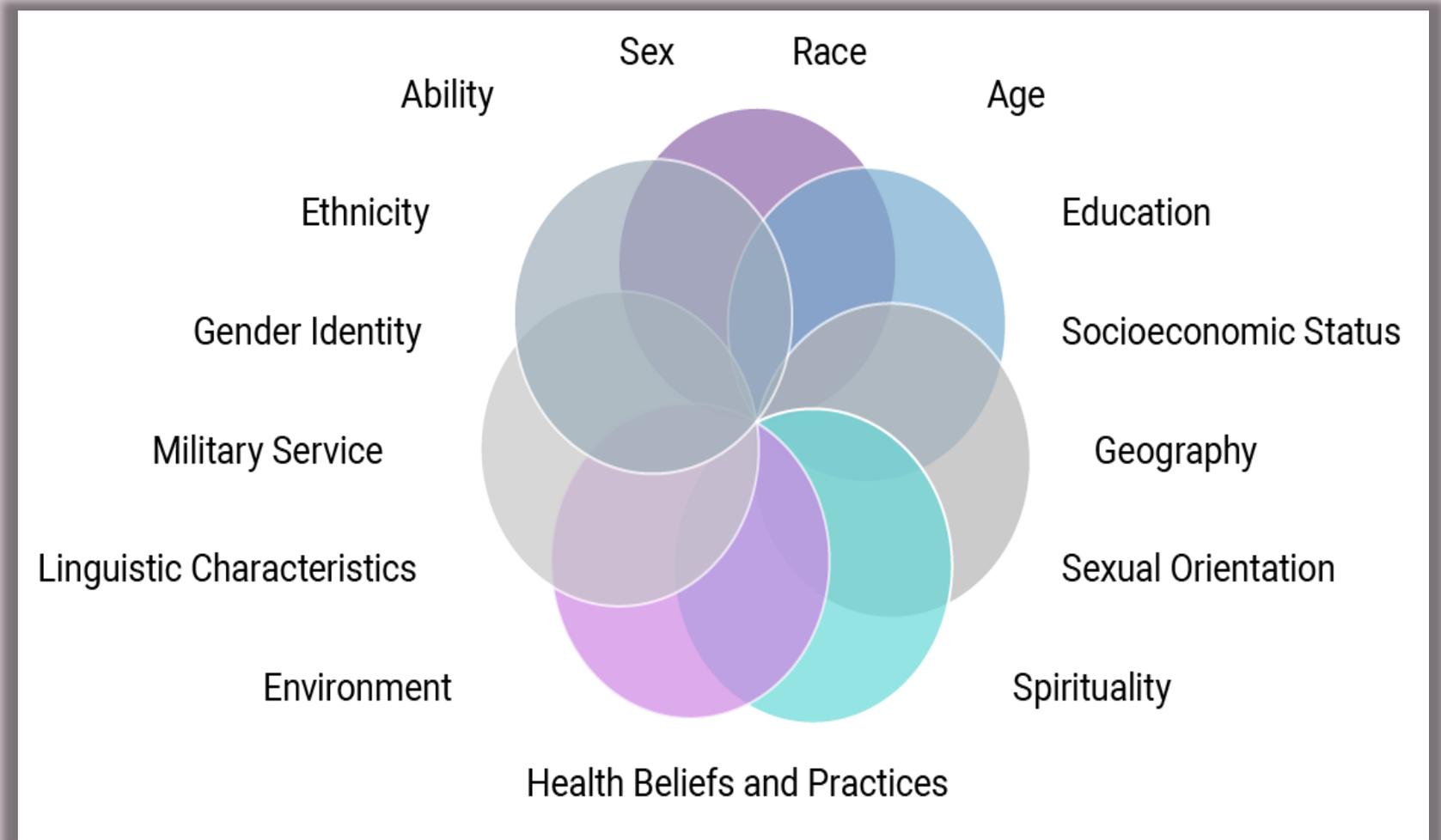
**LANGUAGE MATTERS.**

**Words have power.**

**PEOPLE FIRST.**

The ATTC Network uses affirming language to promote the promises of recovery by advancing evidence-based and culturally informed practices.

# Intersectionality



# Goal



Increase knowledge and awareness of the correlation between methamphetamines and HIV, and the associated risk for particular demographic intersections.

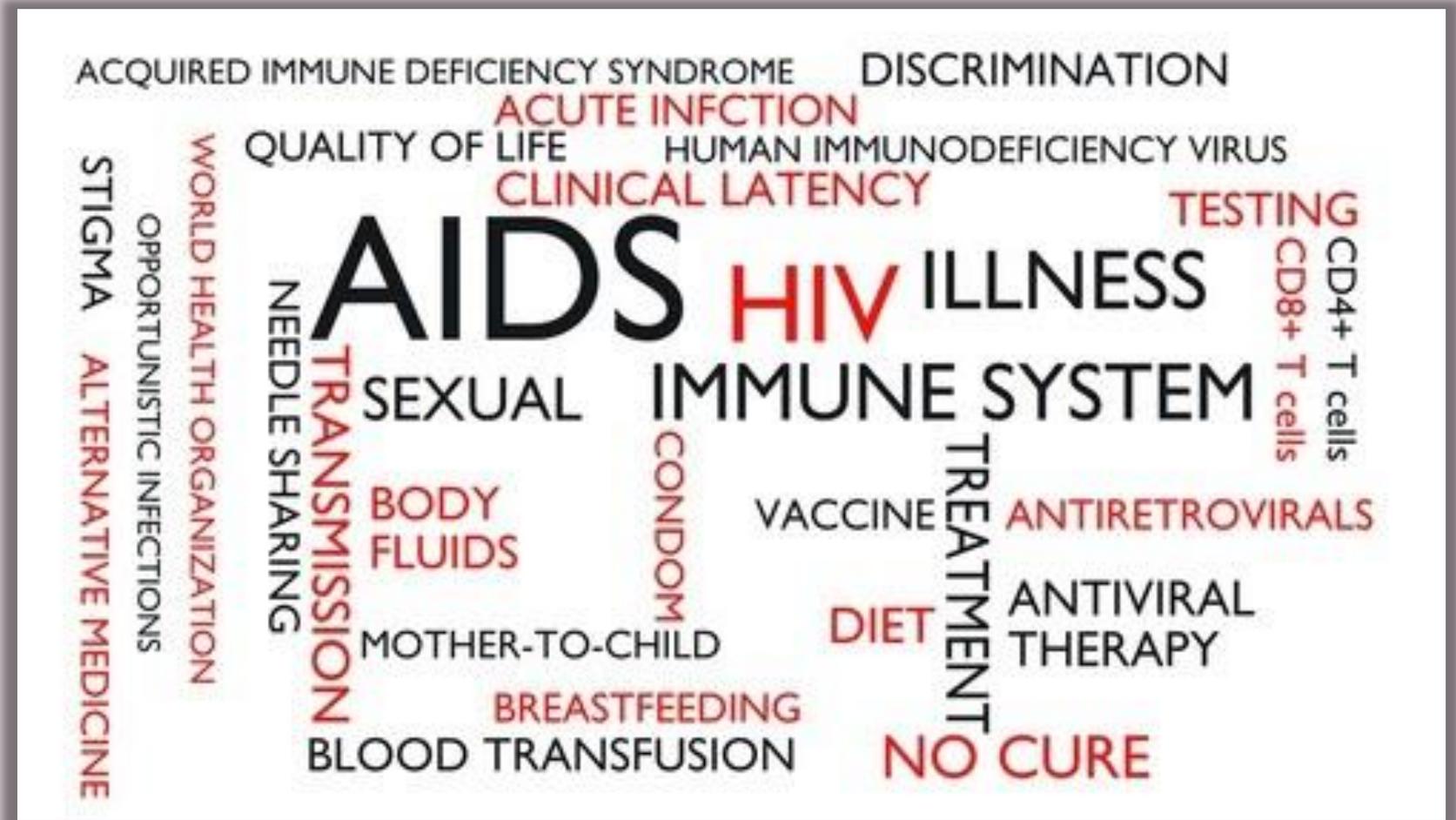
# Educational Objectives



At the end of this module, participants will be able to:

- Describe the confluence of HIV risk and prevalence of stimulant use, especially among MSM of color
- Identify at least 3 reasons why methamphetamine use is so prevalent, especially among MSM
- List motivation for stimulant use from a bio-psycho-social perspective
- Describe forms of methamphetamines
- State 3 Evidence-Based Practices for treatment of methamphetamines
- List effects of methamphetamines on HIV progression
- Describe the results of mixing methamphetamines and anti-retrovirals for HIV

# “Linked Epidemics”: Stimulant Use Disorders and HIV/AIDS



# Defining Syndemic



- Two or more afflictions, interacting synergistically, contributing to excess burden of disease in a population
- HIV/AIDS and Substance Use Disorders (particularly for intravenous use) are co-occurring epidemics with
  - Shared risk factors and causes
  - Cross-cutting benefits of treatment

# Defining MSM of Color



- **Men who have sex with men (MSM)** and other same-gender-loving men continue to be disproportionately affected by HIV and AIDS, particularly among the Black population.
- **Evolving understandings** of the category ‘MSM’ among Black men to reflect intersections between race, socioeconomic status, sexual behavior, sexuality, subjectivities, and social context.
- **Self-Selected Identification**

# HIV Infection and Transmission

- In 2018, an estimated 1.2 million persons had human immunodeficiency virus (HIV) infection in the United States; 36,400 were new infections.

- Transmission rates:

48%	9400 – African American Gay & Bisexual men	MSM
	8000 – Latino Gay & Bisexual Men	
16%	5700 – White Gay & Bisexual Men	64%
	3500 – African American Heterosexual men	
	2400 – People who inject drugs	
	1500 – African American heterosexual women	
	1000 – LatinX heterosexual women	
	910 – White heterosexual women	

# Methamphetamine Use + HIV = HIGH RISK



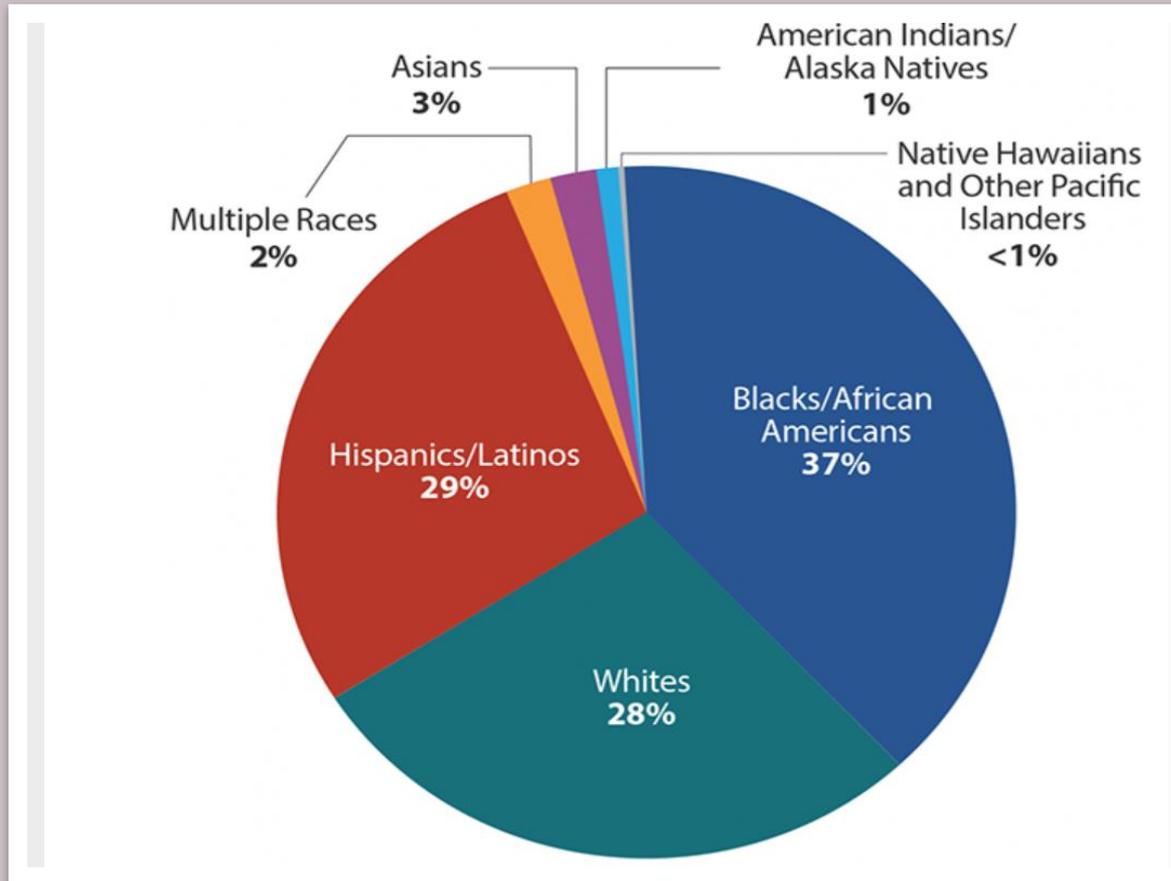
- MSM who use crystal meth are at higher risk of HIV infection, Viral Hepatitis and other diseases transmitted sexually or through IV drug use.
- MSM who use social media (ideal platforms for stigmatized populations) to arrange sexual encounters are more likely to use crystal meth

# HIV Diagnoses 2018



- 69% were among gay, bisexual, and other men who have sex with men
- 24% were heterosexual
- 7% were from people who injected drugs

## New HIV Diagnoses Among Gay and Bisexual Men in the US and Dependent Areas by Race/Ethnicity, 2017



**In 2017, adult and adolescent gay and bisexual men made up 70% (27,000) of the 38,739 new HIV diagnoses in the United States (US) and dependent areas.**

# Stimulant Use Patterns in MSM



- Specificity of prevalence rates within this population is limited as data is often not disaggregated by sexual orientation.
- The prevalence of stimulant use among MSM has been shown to be 20 times that of the general population, with an estimated 10–25% of MSM reporting use of stimulants in the context of sexual behavior in the past 6 months

# Reasons for Increased Stimulant Use



**TRAUMA:** may be a reaction to homophobia, discrimination, or violence experienced due to their sexual orientation.

sexual orientation

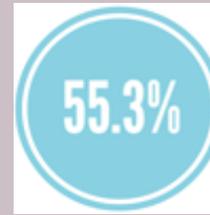
violence experienced due to their

# Trauma and HIV

- Individuals with HIV are disproportionately affected by trauma



of individuals with HIV have a history of childhood sexual or physical abuse



of women with HIV experience intimate partner violence—5x that of the general population



of individuals with HIV have experienced at least one significant traumatic experience



of MSM with HIV have experienced childhood sexual abuse

# Trauma & Substance Use Disorders



- There is a well-established link between trauma and substance use disorder.
- The experience of addiction may be traumatic in of itself since it can put people in dangerous situations and affect health status
- Individuals who are addicted may and often do experience additional trauma

***“Initially, alcohol and other drugs saved my life. Then, later, they turned on me.”***

# Center for Health, Identity, Behavior and Prevention (CHIBPS) Studies of Meth use among MSM

## CHEMSEX

### Context of Meth Use

- At a lover's/friend's house
- At a bar
- At a bathhouse
- At home alone

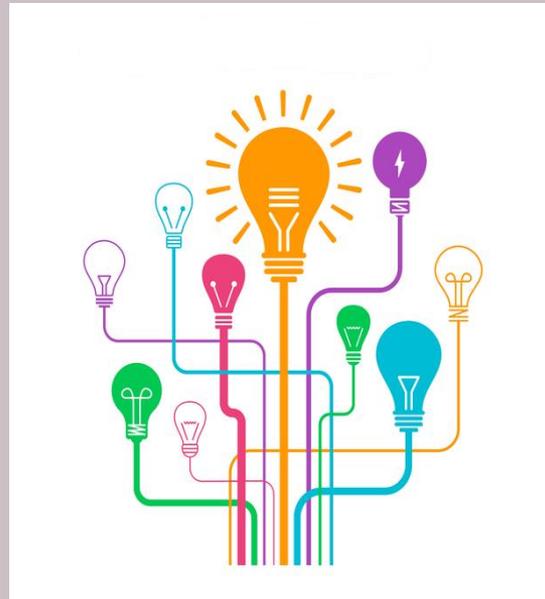
# CHIBPS *(continued)*

## Methamphetamine use with other substances

- Ketamine
- Viagra
- Poppers
- Marijuana
- Ecstasy
- GHB
- Cocaine
- Barbiturates

# Brainstorm

Why do MSM use amphetamines  
and methamphetamines?



# Reasons for Use - Biological



To focus

To lose weight

To stay awake

Increase stamina

To increase energy & desire for sex

To prolong the sexual experience

# Reasons for Use - Psychological



Feel accepted

Increase self-confidence

To cope with stigma & internalized homophobia

Act as an anti-depressant

To escape reality

To deal with feelings from trauma

# Reasons for Use - Social



To be more outgoing

To relax inhibitions

To feel accepted by the group

To talk with other guys

To search for belonging in the Black Gay community

To escape loneliness

# Methamphetamine



## **Methamphetamine Powder**

*Description: Beige/yellowy/  
off-white powder*

## **Base / Paste Methamphetamine**

*Description: 'Oily', 'gunky', 'gluggy' gel,  
moist, waxy*

## **Crystalline Methamphetamine**

*Description: White/clear crystals/rocks;  
'crushed glass' / 'rock salt'*

# Methamphetamine: Patterns of Use

- Either **smoking or injecting** causes an immediate, intense “rush” which **lasts a few minutes**
- Snorting or oral ingestion produces euphoria—a high, but not an intense rush.
  - **Snorting** produces effects **within 3 to 5 minutes**
  - **Oral ingestion** produces effects within **15 to 20 minutes**
- Often abused in “**binge & crash**” pattern
  - “Run”: foregoing food and sleep while continuing to take the drug for up to several days

# Reduction of Methamphetamine Availability



- In 2005, Congress passed the Combat Methamphetamine Epidemic Act (CMEA), which put pseudoephedrine products behind the counter.
- Although some meth makers tried “smurfing,” meth cases plummeted.
- With no more meth lab explosions on the nightly news, the public forgot about the drug.
- Mexican drug cartels stepped in improving production using the P2P Method with higher potency and lower price (\$2,000 per pound)

# Differences in Patterns of Use: Methamphetamine vs. Cocaine



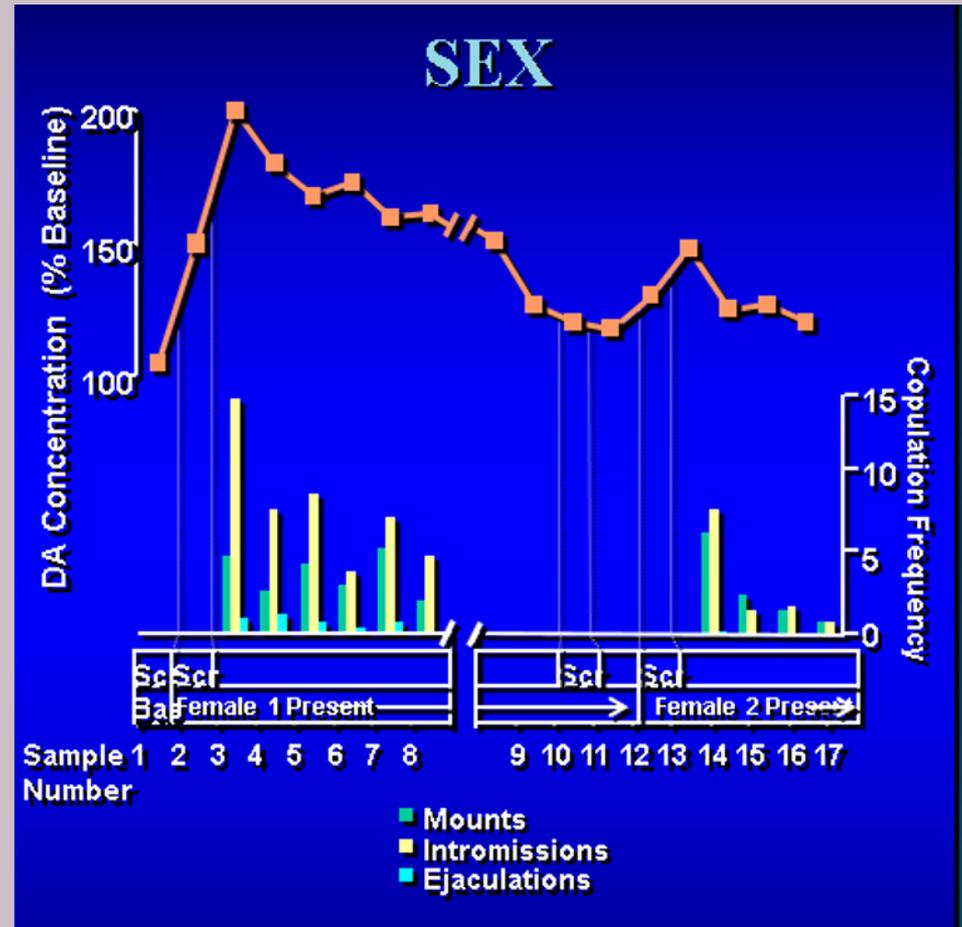
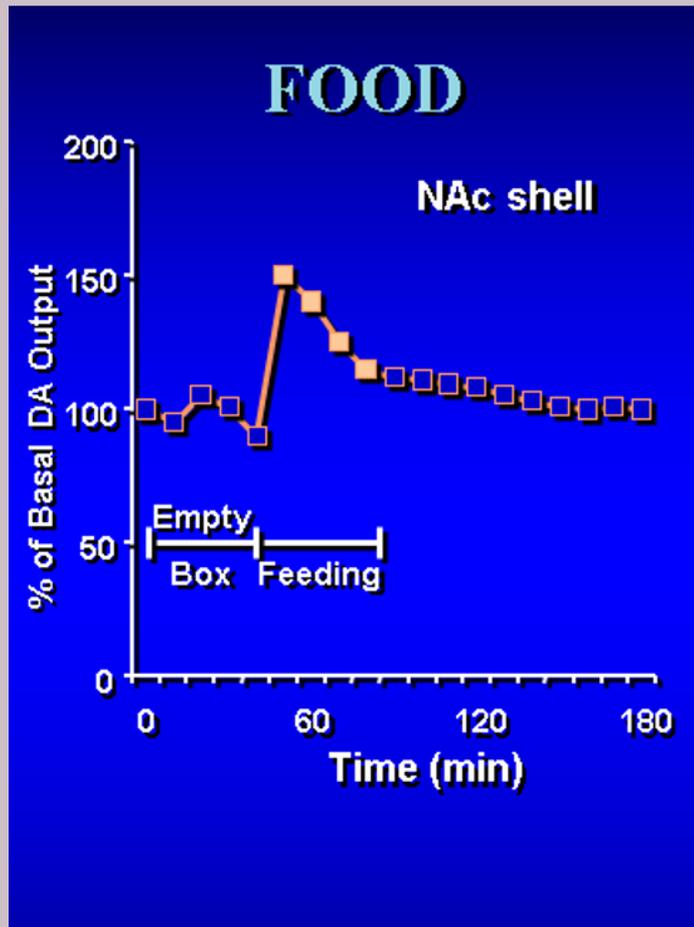
## People who Use Methamphetamine

- Take the drug at the **beginning of the day** and take additional doses at **2 to 4 hour intervals** throughout day

## People who Use Cocaine

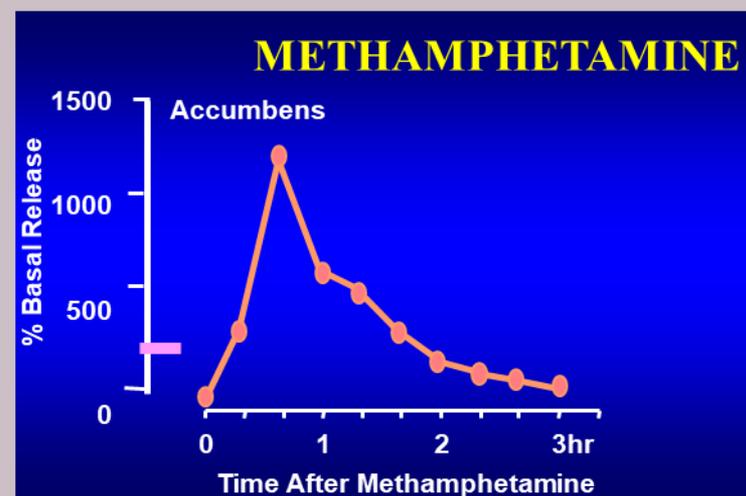
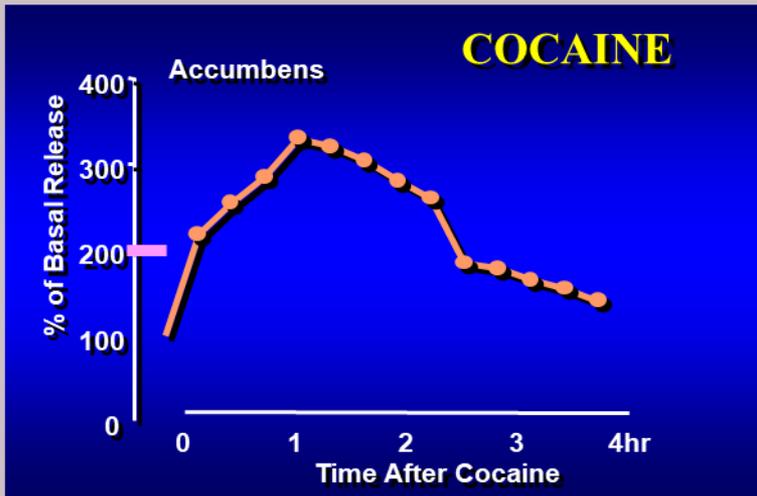
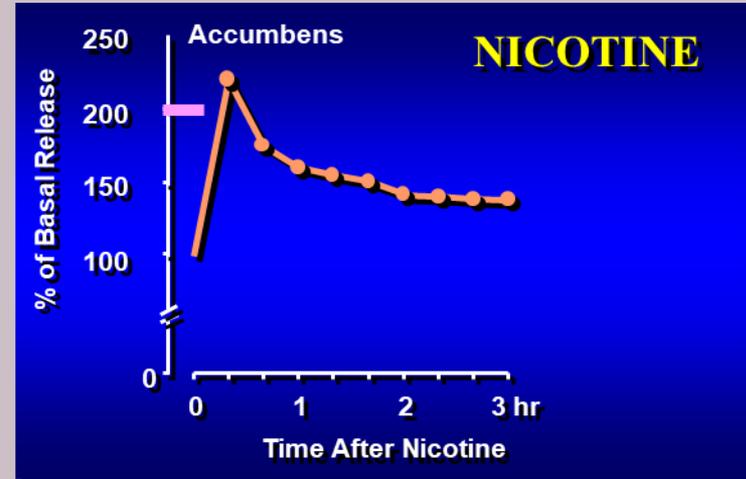
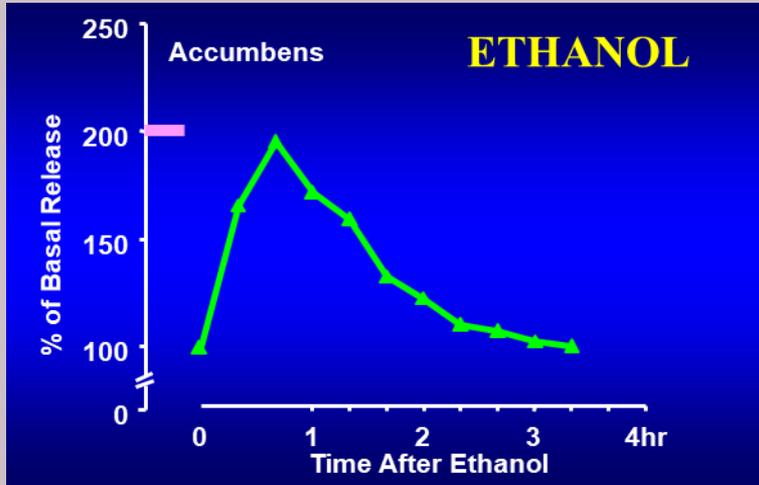
- Take the drug in the **evening** and take additional doses **continuously over a period of several hours**

# Natural Rewards Elevate Dopamine Levels



SOURCES: Bassareo & DiChiara, 1999;  
Fiorino & Phillips, 1997

# Effects of Drugs on Dopamine Release



SOURCES: Shoblock et al., 2003;  
DiChiara & Imperato, 1988

# Contingency Management (1)



- Based on pioneering work of Steven Higgins & colleagues at the University of Vermont
- Very powerful approach for achieving initial abstinence from numerous drugs of abuse
- Patients adhering to targeted behavior (i.e. drug abstinence, attendance, attending job training, etc.) are positively reinforced

# Contingency Management (2)



A technique employing the systematic delivery of positive reinforcement for desired behaviors. In the treatment of methamphetamine dependence, vouchers or prizes can be “earned” for submission of methamphetamine-free urine samples.

# Are there Medications for the Treatment of Stimulant Use Disorder?



- The short answer is **NO**
- A few medicines have had positive results in clinical trials
- To date, these medicines have not demonstrated reproducible results
- Much more research is needed to determine the overall efficacy of these medicines

# Cognitive Behavioral Therapy (CBT)



- Underlying assumption = **learning processes** play an important role in the **development and continuation** of a stimulant use disorder
- CBT attempts to help patients **recognize** the situations in which they are most likely to use stimulants, **avoid** these situations when appropriate, and **cope** more effectively with a range of problems and problematic behaviors associated with substance use.
- CBT is **compatible with** a range of other treatments patients may receive, such as pharmacotherapy.
- Also known as **Relapse Prevention**

# Exercise for Methamphetamine Dependence Study Design

Research has demonstrated benefit of aerobic exercise for improving depression, anxiety, cognitive deficits, and substance use outcomes.

## Methods:

- All 135 study participants received treatment as usual for MUD in a residential treatment program
- They were randomly assigned to either:
  - an 8-week, 3x/week structured aerobic and resistance exercise intervention
  - an 8-week health education condition
- Outcome measure collected through study enrollment and for 12 weeks follow-up.

# Does Exercise Improve Outcomes Post-Treatment?

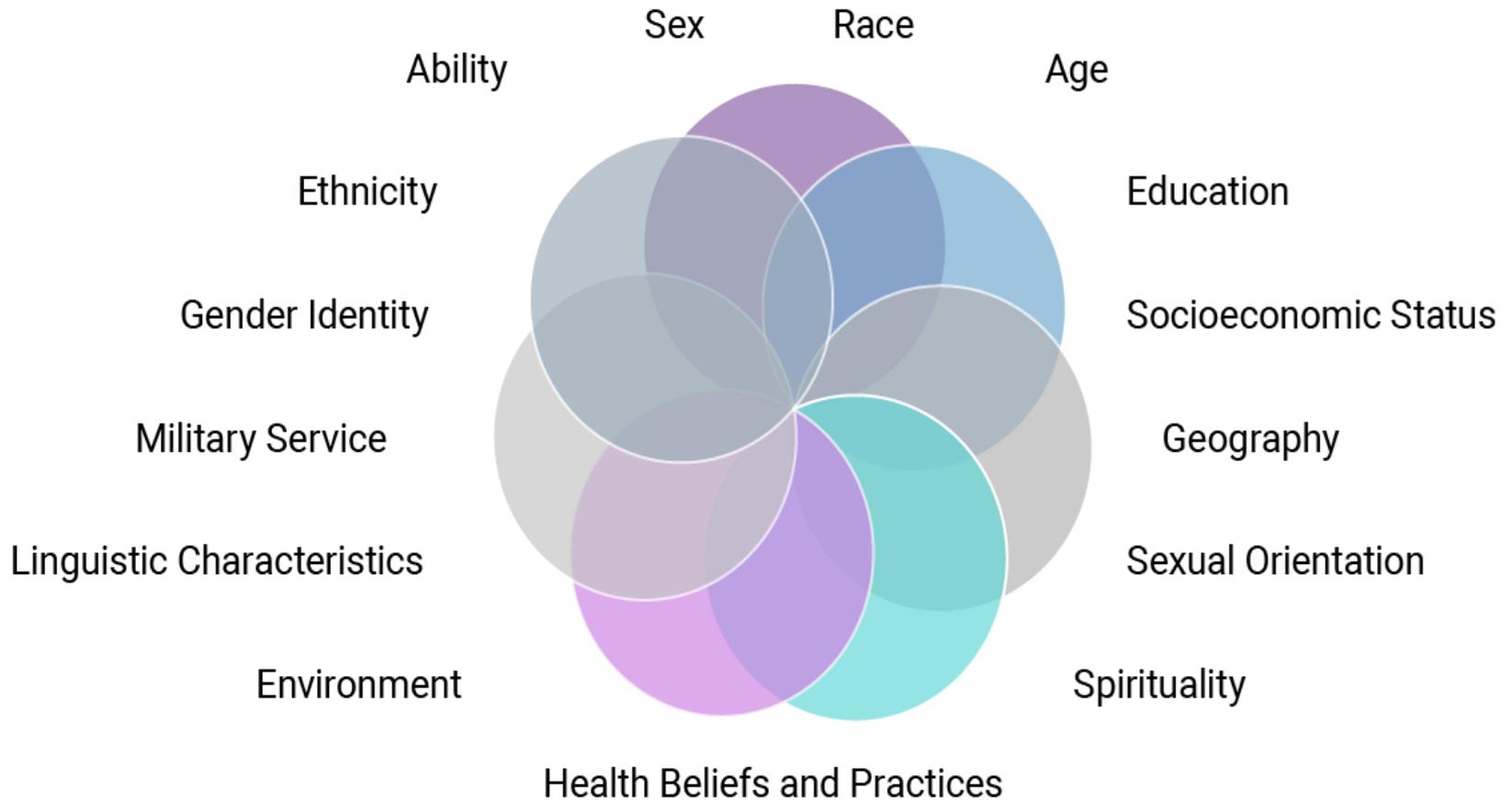
- Yes!
- Fewer exercise participants returned to meth use compared to the education participants at 1-, 3-, and 6-months post-discharge (not statistically significant)
- Significant interaction found for self-reported meth use and meth urine drug test results – lower severity users in the exercise group reported using meth significantly fewer days at the three post-discharge time points than lower severity users in the education group
- Lower severity users in the exercise group also had a lower percentage of positive urine results at the three time points than the lower severity users in the education group (relationships not seen in higher severity groups)

# Homophobia



- External - range of negative attitudes and feelings toward homosexuality or people who are identified or perceived as LGBT
- Has been defined as contempt, prejudice, aversion, hatred or antipathy
- Internal - refers to negative stereotypes, beliefs, stigma, and prejudice about homosexuality and LGBT people that a person with same-sex attraction turns inward on themselves, whether or not they identify as LGBT
- Also applies to conscious or unconscious behaviors which a person feels the need to promote or conform to cultural expectations of heteronormativity

# Intersectionality Revisited



# Methamphetamine & Its Impact on HIV Infection



## Methamphetamine use:

- Lowers **sexual inhibitions**, impairs **judgment**, and provides **energy and confidence** to engage in sexual activity for **long periods of time**
- Causes **erectile dysfunction**
- Causes **mucosal dryness**
- Decreases **adherence** to HIV treatment and medical **follow-up**

# Men Who Have Sex With Men (MSM)



- Rates of HIV sero-prevalence have been reported to be threefold higher among amphetamine-using MSM than among non-amphetamine-using MSM.
- CDC reports that the connection between amphetamine use, high-risk sexual behavior, and HIV transmission in MSM communities poses a major threat of high rates of HIV infection among MSM.

# Methamphetamines & HIV



- Even occasional use can cause faster weight loss and vitamin depletion.
- Clinical studies suggest that current methamphetamine users taking HAART may be at greater risk of developing AIDS than non-users, due to poor medication adherence.
- Long term users experience greater neuronal injury and cognitive impairment due to HIV.
- Accelerated dementia
- In animal studies, methamphetamine has been shown to increase viral replication

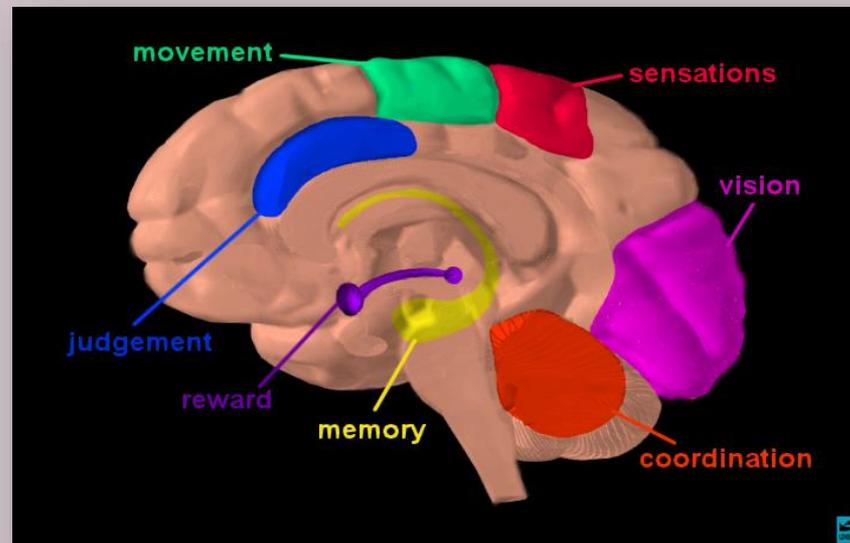
# More on Meth & HIV from NIDA



- May impact everyday cognitive symptoms
- Includes instrumental ADLs – medication management, grocery shopping, planning social activities
- May also impact basic ADLs – bathing, dressing, employment

# The Effect of Methamphetamine on the Brain of a Person Infected with HIV

HIV and meth are thought to have synergistic cognitive and neurological impacts



# Effects on the Brain *(continued)*



In the presence of HIV, methamphetamine can cause:

- Even greater dopamine release and cellular damage
- Additive damage to the frontal cortex and basal ganglia
- Difficulty in adhering to antiretroviral regimen
- Deficits in attention/working memory, abstract decision-making, and psychomotor speed

# Methamphetamines & Anti-retrovirals



- One of the biggest challenges is that men do not take their anti-retrovirals on schedule when using crystal meth
- In addition, many formal interaction studies are carried out in small samples
- People need to ask their physicians about interactions based on the medication being used

# Dr. Stancliff's Advice for Best Practices



Use harm reduction

Reduce stigma – examine your own biases and assumptions

Use neutral terms

# A Provider's Introduction to Substance Abuse Treatment for Lesbian, Gay, Bisexual, and Transgender Individuals

This manual informs clinicians and administrators about substance use disorder treatment approaches that are sensitive to patients among the lesbian, gay, bisexual, and transgender (LGBT) population. It covers cultural, clinical, health, administrative, and legal issues as well as alliance building.

