Promoting Prevention by Understanding the Who, What, and Why of Psychostimulant Use

Funded by Substance Abuse and Mental Health Services Administration

January 24, 2024 Presented by

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Southeast (HHS Region 4)

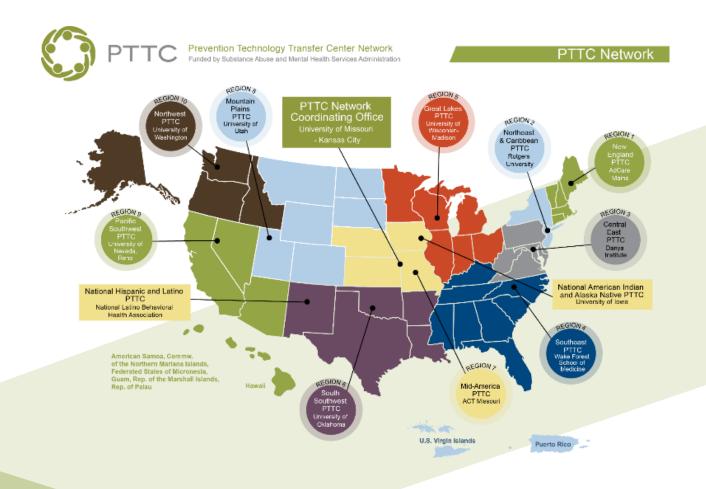
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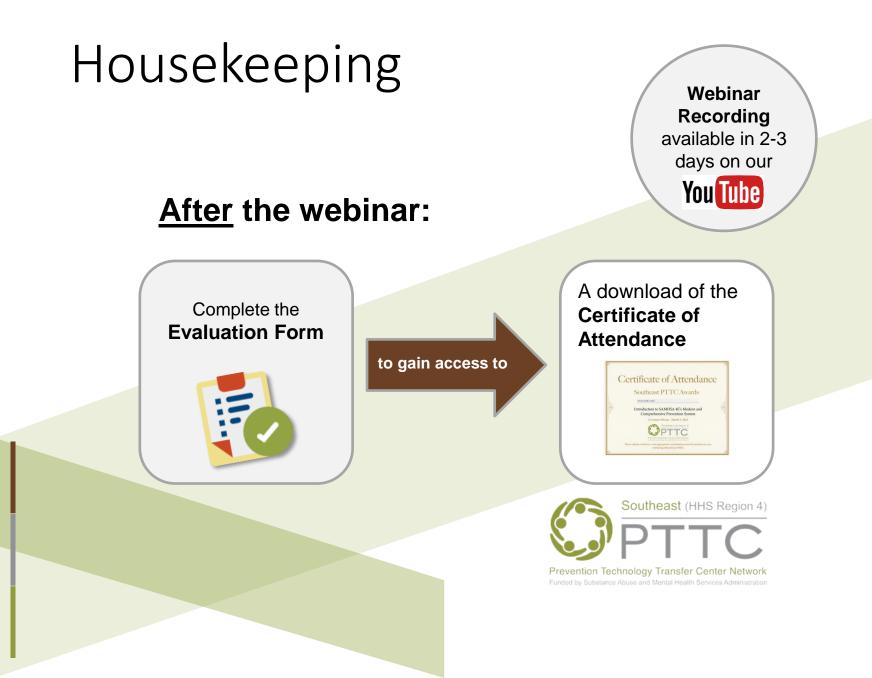
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Prevention Tech

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Today's Presenter

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Daryl Shorter, MD Medical Director, Addictions Services, The Menninger Clinic Associate Professor, Baylor College of Medicine

January 24, 2024







Disclosure of Interests

No financial conflicts of interest to disclose.





Objectives

Summarize the types of psychostimulants, common routes of use & epidemiology of stimulant users

Describe the intersection of social determinants of mental health with stimulant use in the creation of health disparities among vulnerable populations

Identify outreach strategies for engaging communities & promoting prevention efforts among stimulant users



What is a 'Psychostimulant'?

Any agent which activates reward & reinforcement pathways mediated primarily through activation of dopaminergic neurons

Central nervous system (CNS) effects

- Mood elevation / euphoria
- Increased alertness & energy; decreased fatigue
- Improved attention & focus
- Appetite suppression
- Increased self-confidence
- Increased libido & prolonged orgasm



Types of Psychostimulants

Caffeine

- Prescription medications
 - Attention Deficit Hyperactivity Disorder
 - Narcolepsy
 - Overweight/obesity
- Substances
 - Cocaine
 - Methamphetamine/amphetamine
- 3,4-Methylenedioxymethamphetamine (MDMA)



Routes of Psychostimulant Use



Intranasal



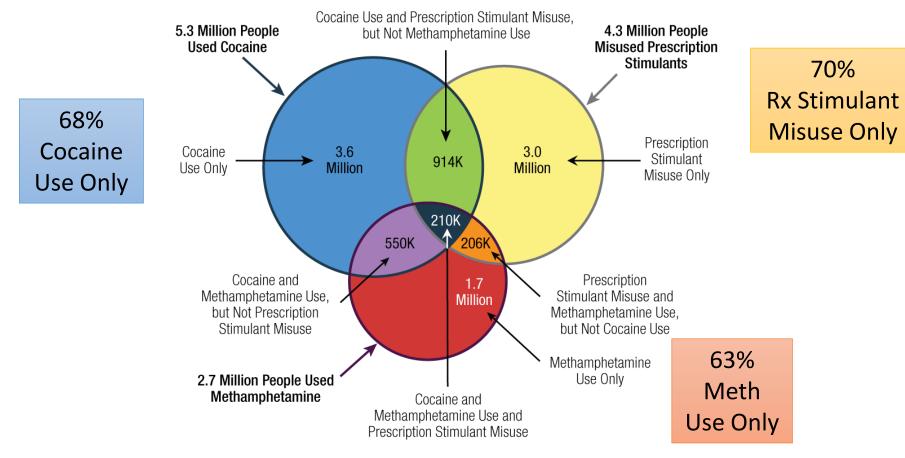
Intravenous

Rectal





Epidemiology of Stimulant Users



10.2 Million People Aged 12 or Older with Past Year CNS Stimulant Misuse



SAMHSA, 2023

Points to Ponder

How does your work take into consideration multi-stimulant use?

In your outreach to community or curriculum development, in what ways are you accounting for the potential 30-40% of stimulant users who take more than one type of stimulant?



Past Yr StUD among Minoritized Communities

Group* (% Past Year SUD)**	1st	2nd	3rd
AI/AN (24%)	Methamphetamine (1.2%)	Cocaine (0.6%)	Stimulant (0.4%)
Asian (9%)	Methamphetamine (0.4%)	Stimulant (0.3%)	Cocaine (0.1%)
Black/Afr Am (18.4%)	Cocaine (0.8%)	Stimulant (0.4%)	Methamphetamine (0.1%)
Hispanic/Latinx (17.4%)	Methamphetamine (0.7%)	Stimulant (0.5%)	Cocaine (0.5%)
Multiracial (22%)	Methamphetamine (1.1%)	Stimulant (0.9%)	Cocaine (0.8%)
Women (14.7%)	Stimulant (0.6%)	Methamphetamine (0.5%)	Cocaine (0.3%)
LGB Individuals (36.5%)	Methamphetamine (1.9%)	Stimulant (1.6%)	Cocaine (1.2%)

*NHOPI people not included due to low precision **SUD = Alcohol and drug use disorders



SAMHSA, 2023

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By 1914, 46 states had regulations on cocaine and 29 states had laws prohibiting opium, morphine & heroin.

NYT, Feb 8, 1914

The War on Drug (Users)

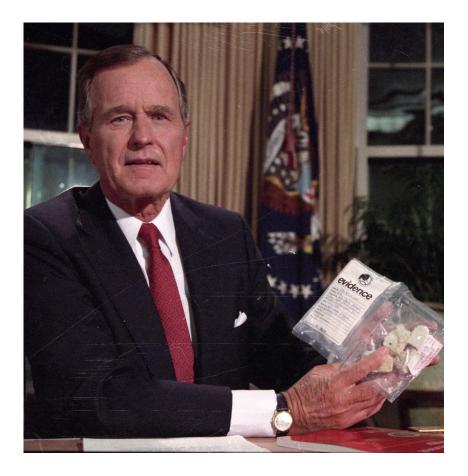
Reagan-era policies shift focus from treatment to enforcement

- Anti-Drug Abuse Act of 1986
 - Established <u>Mandatory Minimums</u>

5 gm of crack & 500 gm of powder cocaine = automatic 5-yr sentence (80% of crack cocaine users were Black)

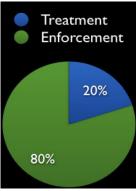
- Drug Control Budget (\$1.7 Billion)
 - \$671M States
 - \$241M (14%) Treatment
 - \$200M (12%) Education
 - \$97M Prisons





"Greatest domestic threat facing our nation..."

- ↑ Spending
 - \$5B (1989) → \$12B (1993)
 - 4y total = \$45B
- ↑ Enforcement
 - Military-grade equipment for anti-drug operations by local/state police



GHW Bush Presidency (1989-93)

The War on Drug (Users)

 Clinton-era policies → further militarization
 1994: Violent Crime Control & Law Enforcement Act (AKA The Crime Bill) → ↑ prisons & police

1995: Clinton & Congress override US Sentencing Commission recommendation to racial disparities in cocaine sentencing

■ 1996: Army Gen Barry McCaffrey named Director of Office of National Drug Control Policy → interdiction efforts increase

Between 1980 and 1997, number of people incarcerated for non-violent, drug related crime rose from 50K → 400K



Cocaine Use among African Americans

African Americans have been linked to cocaine use in media and law for over 100 years

Overpolicing of Black/Brown neighborhoods, harsh penalties and an ultimately failed War on Drug Users led to extensive community disruption and mass incarceration

While use of cocaine among AAs appears to have declined over the past several years, use of methamphetamine has been on the rise



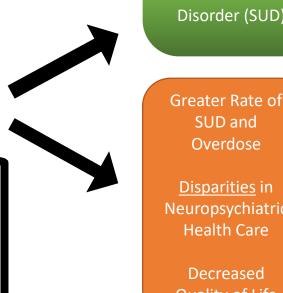
Social Determinants of Mental Health

Structural Racism Sex/Gender Discrimination Homophobia & Transphobia

Systemic Biases (Explicit & Implicit) **Education about Healthcare** Lower SES Lower Income, Food Insufficiency

Neighborhood Housing Instability, Transportation, Toxic Exposures, Safety, Violence

Interpersonal Adversity in Childhood **Negative Life Events** Lack of Social/Emotional Support Living Alone **Mistrust of Systems & Providers Experiences with Discrimination**



Development of Substance Use **Disorder (SUD)**

SUD and Overdose

Disparities in Neuropsychiatric **Health Care**

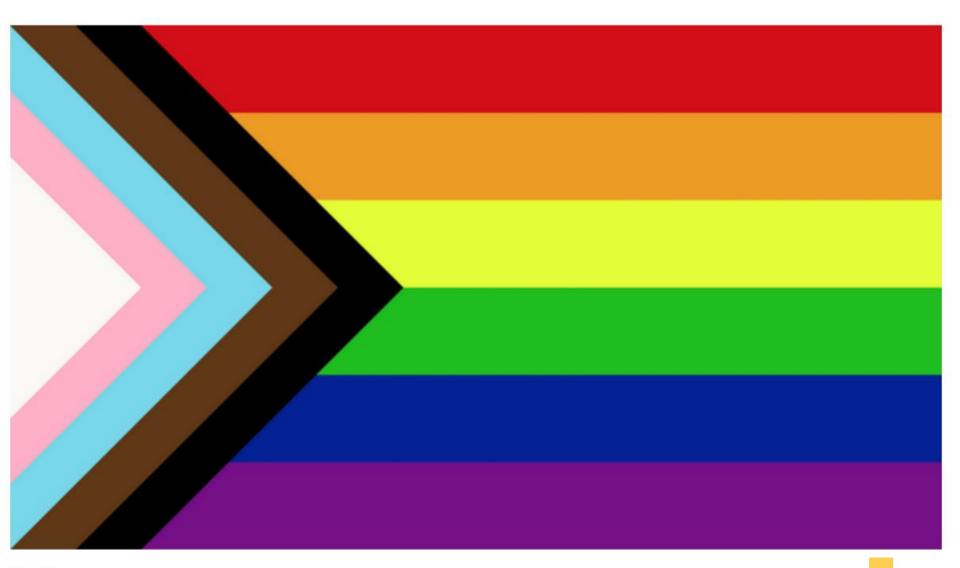
Decreased Quality of Life

Allelic variations that confer genetic Risk for SUD or for Neuropsychiatric Disorders

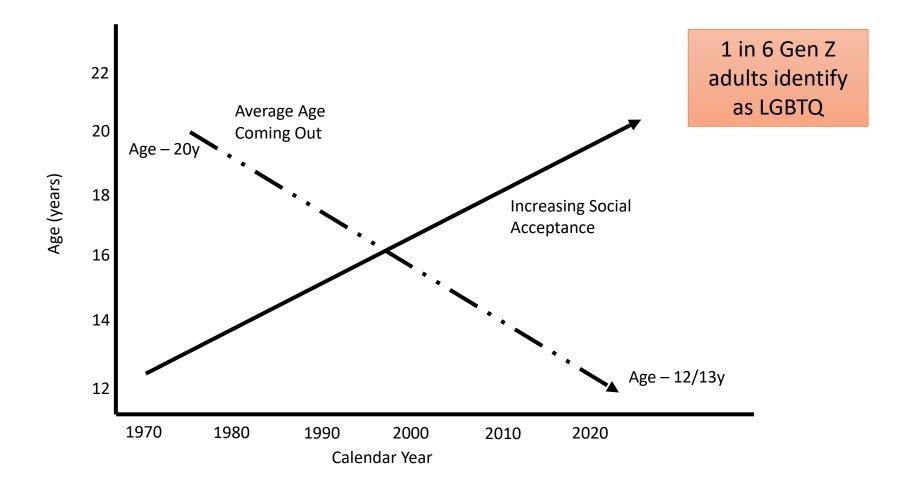
Gene and Environmen interactions

lenninger nere healing comes to mind

From: The Opioid Epidemic: a Crisis Disproportionately Impacting Black Americans and Urban Communities. MC Gondre-Lewis et al. J Racial Ethn Health Disparities, 2022.







https://news.gallup.com/poll/470708/lgbt-identification-steady.aspx





Anti-LGBTQ+ Legislation

Trajectory of Legislation in US 2015 = (15 bills enacted into law)

2021 = 250+ bills introduced (17 bills enacted into law)

2022 = 320+ bills introduced (19 bills enacted into law)

2023 = 510 bills introduced (84 bills enacted into law)

https://abcnews.go.com/US/record-number-anti-lgbtq-legislation-filed-2023/story?id = 105556010



State-level Legislation Introduced in 2023

Restricting student & educator rights (233)

- Curriculum restriction (28)
- Forced outing in schools (23)
- School sports bans (22)
- Healthcare restrictions (187)

TX SB 14 (June 2023) – prohibits state-licensed physicians from performing procedures and providing gender-affirming treatments for children younger than 18y

Barriers to accurate IDs (20)

"Drag bans" (18)

TN HB 0030 (Jan 2024) – rewrote definition of "adult cabaret entertainment" to include drag performances & argued harmful to minors (withdrawn 01/22/2024)

https://www.aclu.org/legislative-attacks-on-lgbtq-rights-2023?impact=



Anti-LGBTQ+ Hate Crimes Increasing

FBI Annual Crime Report (2022)

14% increase in reports of crime based on sexual orientation
 2021 = 1,711
 2022 = 1,947

33% increase in reported hate crimes based on gender identity
 2021 = 353
 2022 = 469

More than 1 in 5 of any type of hate crime is motivated by anti-LGBTQ+ bias

https://www.fbi.gov/news/press-releases/fbi-releases-2022-crime-in-the-nation-statistics





Increasing attacks through legislation; anti-LGBTQ violence

Persistent negative health and psychosocial outcomes

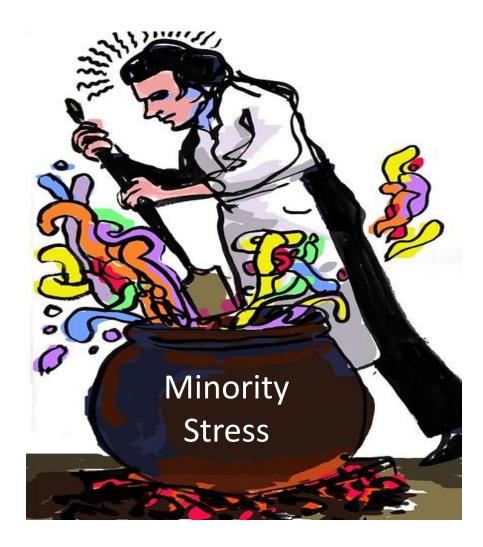


LGBTO Identity Formation











LGBTQ Health: Intersectional Identity

Queer people of color (POCs)

Ostracism from racial/ethnic group

Racism within queer community

Feeling of not belonging anywhere

Creation of <u>conflict of loyalty</u>



AA and Methamphetamine: Cultural Differences

African Americans

- Older at time of first use
- Fewer grams used in past 30 days
- Larger percentage reporting anonymous sex partners in past 2 months
- Lower levels of social stigma, negative self-esteem from MA use
- Less likely to use via injection (intravenous)



Semple et al., 2009

Methamphetamine Use Among Black Gay Men

- Centrality of gay bars/clubs promoted perception that participation in the LGBTQ+ community is intimately linked with substance use, sex
- Many Black gay men perceive their racial/ethnic community strongly discourages the use of 'hard drugs' like MA
- Like other 'hard drugs,' MA seen as "foreign," epitomized by its association with White gay men.



McKay et al., 2012

Initial Methamphetamine Use

- Common pathways to initial MA use by AAs include exposure to the drug by White men (e.g., sex partner or significant other)
- Introduction by platonic gay friend or in non-sexual gay social settings (e.g., bars)
- Increase in MA trafficking has increased opportunities for use in racially minoritized communities



Sexton & Carlson, 2005

Points to Ponder

Multiple identities' consider primary/core characteristics as well as their relationship to the social/cultural worlds

Marital/Parental Status	Educational background
Language/Accent	Geographic location
Appearance	Religion
Location	Nationality





Nonmedical Use of Rx Stimulants

↑↑ ED visits despite no change in clinic visits involving Rx stim
 At risk: persons aged 18-25 years old; college students

- Among college students
 2/3 offered Rx stimulant for NMU
 31% reported NMU
- Motivation for use = enhanced academic performance
 Assoc with other drug use and/or heavy drinking



Butler SF et al., 2021.

Nonmedical Use of Rx Stimulants

- American Community Survey (2016)
- Among students reporting NMU of Rx stimulants
 - 43% lifetime diagnosis of ADHD
 - 90% reported polysubst use (55% using substances other than MJ)
 - 43% use an illicit drug prior to Rx stimulant NMU
 - 25% use both at the same time
 - 32% engage in Rx stimulant NMU prior to illicit drug use
- Most use oral (52-95%), but non oral use also present (7-48% via snorting)

Butler SF et al., 2021; Faraone SV et al., 2020.



Nonmedical Use of Rx Stimulants

↑↑ NMU among Black/Afr Ams assoc w/rise in MDMA use

- Bzdp alleviate MDMA comedown (59%)
- Opioids give a different quality high (35%)
- Stimulants provide added energy (13%)

Among Rx stimulant NMU, Hispanic/Latinx w/higher frequency of use c/w Whites, but not StUD

• Major depression $\rightarrow \uparrow$ odds of opioid, stim use (religiosity protective?)

Source: #1 – Rx by 1+ MD/DO; #2 – bought fr dealer, stranger

Han et al., 2017; Rigg KK and Sharp A, 2018; Paneto, 2023.



Why? Risk Factors & Motivations

Risk Factors for NMU of Stimulants

Male

Age 18-25

White or 'Other' Race categorization

Fraternity/sorority membership

Substance use (incl alcohol, cannabis, other stimulants)

Motivations

- Study better
- Stay awake
- Lose weight

Faraone SV et al., 2020.



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Prevention & Outreach

What are we trying to prevent?

- Drug initiation (among whom?)
- Substance use disorder onset & recurrence
- Overdose (nonfatal & fatal)
- Sexually transmitted infections (Hep C, HIV)
- Blood borne infections from sharing drug use equipment
- Medical complications (cardiac, pulmonary, renal, dermatologic, etc)
- Psychiatric comorbidity (overamping, psychosis, mood disorder)
- Psychiatric mortality (suicide)
- Carceral/criminal justice consequences of substance use



Increase Recovery Capital

Embed support activities, skills which enhance motivation

- Employment opportunities
- Engage faith communities (religious/spiritual practice)
- Education programming (GED) and/or trade skills
- →Support from non-drug using family/friends creates community, social networks of recovery

When possible, pair services with safe housing & food access



Cheney et al., 2016.

Health Education

Provide health education re: HIV, other medical illness

- Community-based and/or gender specific groups
- Offer food or other incentives to increase attendance
- Make programming FUN
- HCWs may be ideal, but peer PLWH offer messages of hope
- No shame/stigma re: trading sex for drugs, IVDU, unprotected sex, bisexuality, or multiple partners
- Culturally-specific language; repeat messages mult sessions
- Risk reduction plans should reflect individual's ideas, values

Brown and Hill, 2005; Cottler et al., 1998.



Focused Interventions for NMU of Stimulants

First year college students

- Standardize offering on college campuses
- Challenge positive expectancies re: Rx stimulant use
- Teaching/development of time mgmt skills (?)
- Use peers to support abstinence; discuss negative consequences
- Encourage mental health treatment for ADHD, depression, SUD

Support systems

- Promote awareness of legal risks for diversion
- Increase prescriber vigilance
- Empower parents to avoid promotion of NMU in favor of grades

Antshel et al., 2023; Arria & DuPont, 2010.



Provide Support to LGBTQ Individuals

Gay-Straight Alliances (GSA)

LGBT youth who attend school without a GSA have ↑ risk for substance use incl cocaine, hallucinogen, cannabis and NMU of ADHD/stimulant medications

Target HIV Risk Behaviors

- Encourage individuals to know their status and that of partners
- Promote pre- and post-exposure prophylaxis (PrEP & PEP)

Heck et al., 2014; Hatzenbuehler, 2011.



Final Points

Psychostimulant use is widely varied based upon community identification as well as multiple identity status. Bringing this awareness to our work with patients and community can be extremely helpful in establishing connection & providing education that is both culturally competent and humble

Understanding the historical relationship and current factors of groups with stimulants provides opportunities to enhance prevention efforts



Final Points

Tackling social and structural determinants of health is perhaps one of the most important aspects of prevention. Consider strategies for incorporating this work into organizational and community offerings.

Seek feedback from communities about their needs and perspectives and include stakeholders in creation of prevention efforts.





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