



## The Intersection of HIV and Substance Use: Enhancing the Care Continuum with Evidence-Based Practices

**Training Series: Session 3**  
November 20, 2024


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
  
**Camera OFF**

  
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
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## HOUSEKEEPING

**Today is Session 3**

**Please complete the evaluation and post-test for the webinar that will be sent out via email after each session.**

**You will be receiving a PDF of today's presentation.**

**This session is being recorded.**

### Follow-up questions?

Contact Gabriel Velazquez:  
gvelazquez@healthmanagement.com

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## CEUS AND CMES ELIGIBILITY AND DISTRIBUTION

- » This series is eligible for both CEUs and CMEs
  - » These activities have been approved for CEUs by the Minnesota Board of Behavioral Health and Therapy for 3 hours of credit for LADCs and LPC/LPCCs (total of 12 hours if all four sessions are fully attended)
  - » These activities have been approved for CMEs by the American Academy of Family Physicians for 3 hours of credit (total of 12 hours if all four sessions are fully attended)
- » To qualify for CEUs or CMEs, you are required to
 

**Follow-up questions?**  
 Contact Gabriel Velazquez:  
 gvelazquez@healthmanagement.com


  1. Complete the pre-training quiz
  2. Be in attendance for the entire session
  3. Complete the accompanying evaluation survey for each session attended
  4. Complete the post-training quiz
- » CEU/CME certificates will be issued approximately 1-2 weeks AFTER the completion of the series (Session 4: November 27<sup>th</sup>).

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## ACKNOWLEDGMENTS


We would also like to thank our community partners for their support in developing this curriculum.




RURAL AIDS ACTION NETWORK




the Aliveness project



Indigenous Peoples Task Force



RURAL AIDS ACTION NETWORK  
Providing Care, Services and Support




AMERICAN COLLEGE OF RURAL AND COMMUNITY MEDICINE

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## LAND ACKNOWLEDGMENT



Every community owes its existence and vitality to generations from around the world who have contributed their hopes, dreams, and energy to making the history that led to this moment. Some were brought here against their will, some were drawn to leave their distant homes in hope of a better life, and some have lived on this land for more generations than can be counted. Truth and acknowledgment are critical to building mutual respect and connection across all barriers of heritage and difference.

We begin this effort to acknowledge what is buried by honoring the truth. **We are standing on the ancestral lands of the Dakota people. We want to acknowledge the Dakota, the Ojibwe (pronounced ow-jeeb-way), the Ho Chunk, and the other nations of people who also call this place home.** We pay respects to their elders past and present.


Please take a moment to consider the treaties made by the Tribal nations that entitle non-Native people to live and work on traditional Native lands. Consider the many legacies of violence, displacement, migration, and settlement that bring us together here today. Please join us in uncovering such truths at any and all public events.\*

\*This is the acknowledgment given in the USDAC Honor Native Land Guide – edited to reflect this space by Shannon Geshick, MTAG, Executive Director Minnesota Indian Affairs Council

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## TODAY'S PRESENTERS




**Charles Robbins, MBA**  
*(he/him/his)*

Principal  
Health Management Associates



**Linda Follenweider, MS, APRN**  
*(she/her/hers)*

Managing Director  
Health Management Associates



**Shannon Robinson, MD**  
*(she/her/hers)*

Principal  
Health Management Associates

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**SR0**

## DISCLOSURES

Faculty	Nature of Commercial Interest
Charles Robbins, MBA	Mr. Robbins discloses that he is an employee of Health Management Associates, a national research and consulting firm providing technical assistance to a diverse group of health care clients.
Linda Follenweider, MS, APRN	Ms. Follenweider discloses that she is an employee of Health Management Associates, a national research and consulting firm providing technical assistance to a diverse group of health care clients.
Shannon Robinson, MD	Dr. Robinson discloses that she is an employee of Health Management Associates, a national research and consulting firm providing technical assistance to a diverse group of health care clients and that her husband manufactures suicide resistant bedding and garments.
Jeanene Smith, MD	Dr. Smith discloses that she is an employee of Health Management Associates, a national research and consulting firm providing technical assistance to a diverse group of health care clients.

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## AGENDA FOR WEBINAR SERIES

Session	Topics
<b>#1</b> <b>WEDNESDAY,</b> <b>NOVEMBER 6</b> 12:00 pm to 3:00 pm	<input type="checkbox"/> Screening, and Assessment <input type="checkbox"/> Understanding HIV <input type="checkbox"/> HIV Testing, Treatment and Prevention <input type="checkbox"/> The Science of Addiction
<b>#2</b> <b>WEDNESDAY,</b> <b>NOVEMBER 13</b> 12:00 pm to 3:00 pm	<input type="checkbox"/> Ethical and Legal Issues <input type="checkbox"/> Funding and Policy Considerations <input type="checkbox"/> HIV Risk Reduction <input type="checkbox"/> SUD Harm Reduction <input type="checkbox"/> HIV and Stigma <input type="checkbox"/> Motivational Interviewing
<b>#3</b> <b>WEDNESDAY,</b> <b>NOVEMBER 20</b> 12:00 pm to 3:00 pm	<input type="checkbox"/> <b>Working with Justice Involved Persons</b> <input type="checkbox"/> <b>Chem Sex</b> <input type="checkbox"/> <b>Substance Use Disorder Treatment with Medications</b> <input type="checkbox"/> <b>Mental Health Treatment and Counseling</b> <input type="checkbox"/> <b>Stimulant Use</b>
<b>#4</b> <b>WEDNESDAY,</b> <b>NOVEMBER 27</b> 12:00 pm to 3:00 pm	<input type="checkbox"/> Cultural, Racial and Sexual Identities <input type="checkbox"/> Pregnancy and HIV, SUD/ODU <input type="checkbox"/> Accessing, Obtaining, and Integrating Services for Individuals with HIV and SUD in Minnesota

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## TIME FOR A POLL

**Please indicate the sector(s) in which you currently serve:**

- A. Community based organizations (Social Services, HIV, LGBT, etc.)
- B. Corrections (includes Probation, Jail, Prison)
- C. County Behavioral Health, Public Health, Human Services
- D. Non-county behavioral health
- E. Federally Qualified Health Center (FQHC)
- F. Narcotic Treatment Program/Opioid Treatment Program
- G. Outpatient Treatment Program
- H. Residential Treatment Program
- I. Aftercare services (e.g., sober living, other recovery housing, recovery community centers, etc.)
- J. Harm Reduction Services/SSPs
- K. Other (please specify in the chat)

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## TIME FOR A POLL

**Please indicate your primary role or discipline:**

- A. Physicians, Physician Assistant, Nurse Practitioners, Nurses (RN, LVN)
- B. Social Workers
- C. Addiction Counselors (LADCs)
- D. Peer Recovery Support Positions
- E. Substance Use Navigators (SUNs)
- F. Administrators, Program Managers
- G. Psychologists, LMFTs
- H. Criminal Justice Professionals
- I. Community Members
- J. Other (please specify in the chat)

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## Slide 9

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**SR0**    [@Gabriel Velazquez] for our other projects the following has been added at HMA CME Director's request. We need to ensure there is a current COI statement for this project that includes this information

Shannon Robinson, 2024-11-06T17:55:08.299

**GV0 0**   I'm not too sure where to find the current COI statement. I'll ask Charles

Gabriel Velazquez, 2024-11-13T21:23:52.204

**GLOSSARY OF TERMS (REVISITED)**

- » Sexual orientation – a person’s identity in relation to the gender or genders to which they are sexually attracted (straight, gay, lesbian, asexual, bisexual, pansexual)
- » Gender identity and/or expression - internal perception of one’s gender; how one identifies or expresses oneself.
  - » Cisgender – a term used to describe a person whose gender identity aligns with those typically associated with the sex assigned to them at birth
  - » Transgender – refers to an individual whose current gender identity and/or expression differs from the sex they were assigned at birth (may have transitioned or be transitioning in how they are living)
  - » Gender Expansive - refers to an individual who expresses identity along the gender spectrum (genderqueer, gender nonconforming, nonbinary, agender, two spirit)
- » Sexual Minority – refers to a group whose sexual identity orientation or practices differ from the majority of and are marginalized by the surrounding society.

SOURCE: Centers for Educational Justice and Community Engagement, UC Berkeley

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**GLOSSARY OF TERMS (REVISITED)**

- » Race - is usually associated with inherited physical, social and biological characteristics. In this context that means race is associated with biology. Institutionalized in a way that has profound consequences (White, African American, American Indian Alaskan Native, Native Hawaiian or Pacific Islander)"
- » Ethnicity - a term used to categorize a group of people with whom you share learned characteristics and identify according to common racial, national tribal, religious, linguistic, or cultural origin or background. (Hispanic, Non-Hispanic Black, Non-Hispanic Black, etc.)

SOURCE: US Office of Management and Budget; Federal Register Vol. 62(210): 58782

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**COMMON ACRONYMS (REVISITED)**

ART – Antiretroviral therapy	PEP – Post-exposure prophylaxis
AUD – Alcohol use disorder	PrEP – Pre-exposure prophylaxis
IDU – Injection or intravenous drug use	PLWH – Person(s) living with HIV
MSM – Men who have sex with men	PWID – Person(s) who injects drugs
ODU – Opioid use disorder	SUD – Substance use disorder
PEH – Person(s) experiencing homelessness	

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**WORKING WITH JUSTICE-INVOLVED INDIVIDUALS**

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### LEARNING OBJECTIVES:

I

Describe the importance of substance use disorder treatment with medications in criminal justice settings

II

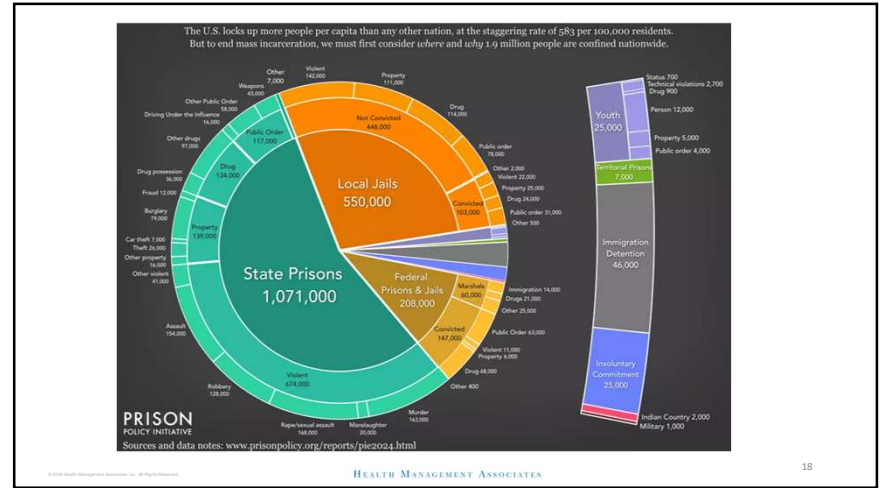
List 3 actions to take to ensure continuity of care for clients upon release from justice settings

III

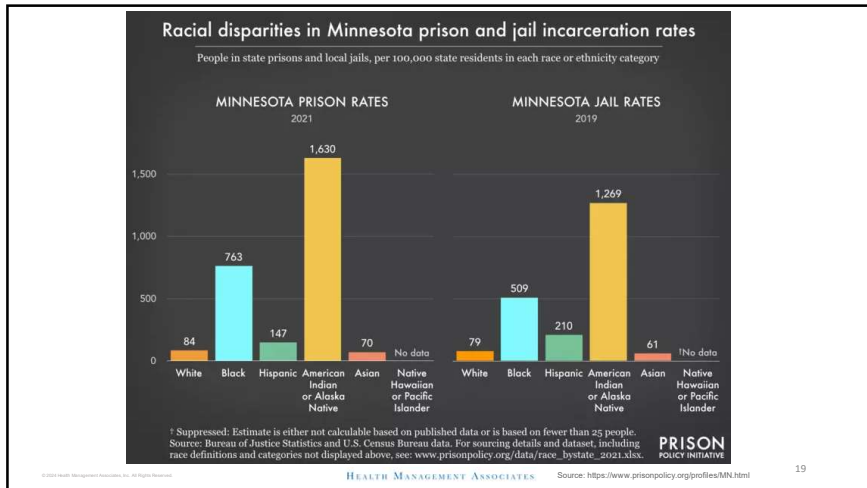
Compare and contrast FDA approved medications for Alcohol Use Disorder (AUD), Opioid Use Disorder (OUD), and opioid reversal

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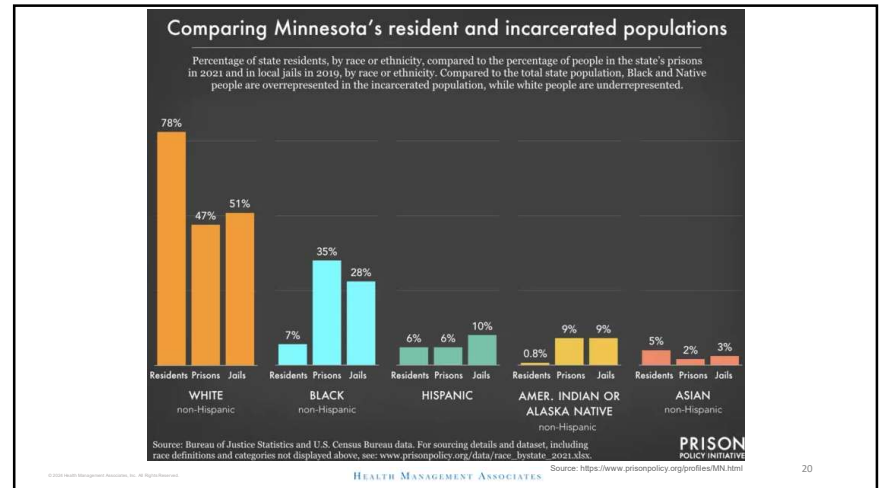
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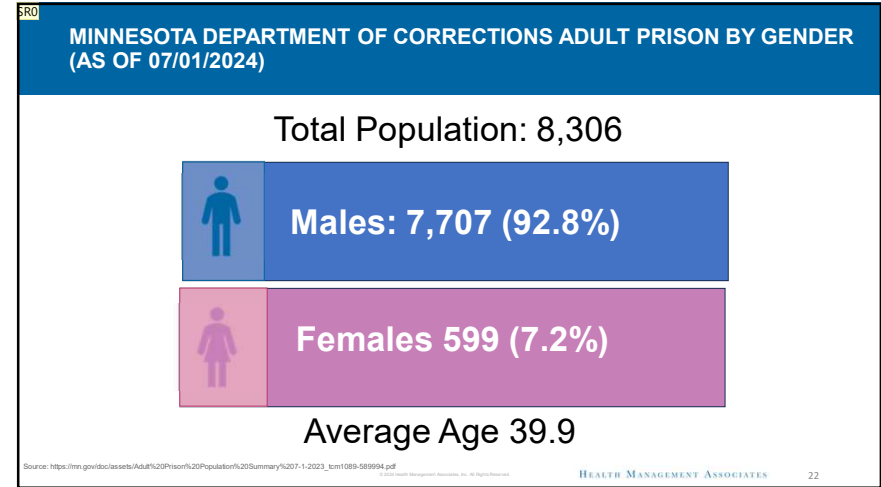


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Race/Ethnicity	Count	Percentage of incarcerated population (%)	<b>MINNESOTA DEPARTMENT OF CORRECTIONS ADULT PRISON POPULATION SUMMARY (AS OF 01/01/2024)</b>  <b>Average age: 39.9</b> <b>Average ADP 2024: 8,275</b> <b>Males: 7,699 (93.0%)</b> <b>Females: 576 (7.0%)</b>
White	4,164	50.3%	
Black	3,125	37.8%	
American Indian	748	9.0%	
Asian	218	2.6%	
Unknown/Other	20	0.2%	
<b>Total</b>	<b>8,275</b>	<b>100%</b>	
<b>Note:</b> 415 (5.0%) of the above are of Hispanic ethnicity.			

Source: [https://mn.gov/doc/assets/AdultPrisonPopulationSummary/01-01-2024\\_tcm1089-616186.pdf](https://mn.gov/doc/assets/AdultPrisonPopulationSummary/01-01-2024_tcm1089-616186.pdf)

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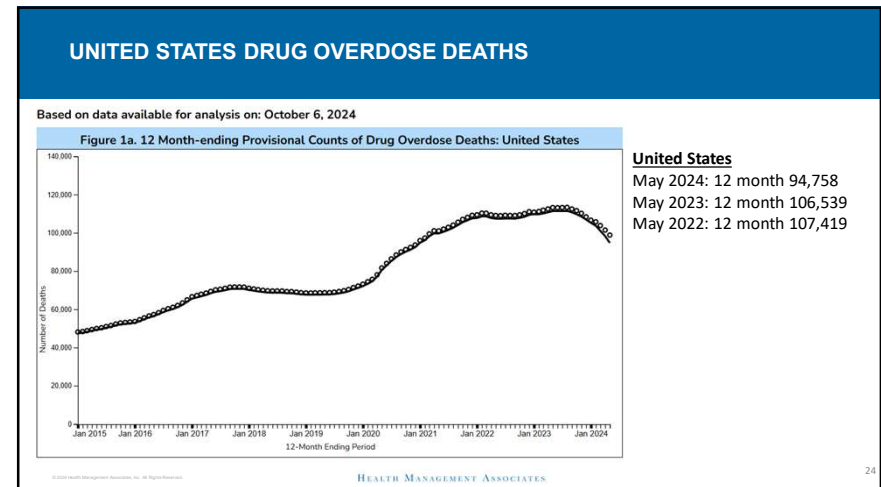


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<b>MINNESOTA DEPARTMENT OF CORRECTIONS ADULT PRISON POPULATION SUMMARY (AS OF 01/01/2024)</b>			
Top Six Offenses	Count	Percentage (%)	
Homicide	1,636	19.8%	
Criminal Sexual Conduct	1,599	19.3%	
Drugs	1,323	16.0%	
Weapons	822	9.9%	
Assault	705	8.5%	
DWI	393	4.7%	
<b>Note:</b> Percentages are based on the total population of 8,274			
Releases (FY2023)	Count	Percentage (%)	
Supervised Release/Parole	3,779	78.9%	
Community Programs	689	14.4%	
Discharge	381	5.8%	
Other	42	0.9%	
<b>Total</b>	<b>4,791</b>	<b>100.0%</b>	

Source: [Minnesota Department of Corrections Adult Inmate Profile as of 01/01/2004 \(mn.gov\)](https://mn.gov/doc/assets/Minnesota%20Department%20of%20Corrections%20Adult%20Inmate%20Profile%20as%20of%2001/01/2004/mn.gov)

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## Slide 22

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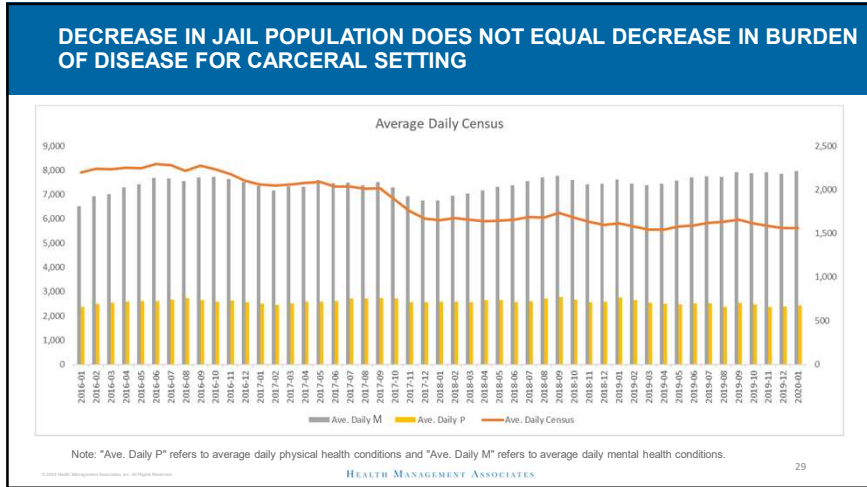
**SR0**

[@Gabriel Velazquez] can you please see if there is updated information as this is over a year old.

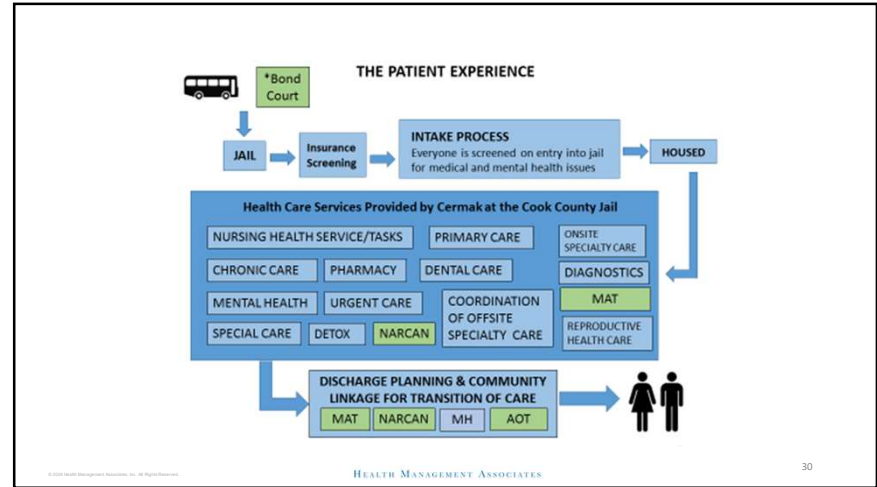
Shannon Robinson, 2024-11-06T17:57:43.228







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### TRANSITION OF CARE

- » Transition of Care – The movement of a patient from one setting of care (hospital, ambulatory primary care practice, ambulatory specialty care practice, long-term care, home health, rehabilitation facility) to another.
- » Important Issues Regarding Release
  - » Narcan® on release
  - » Warm handoff to community provider
  - » Challenges in jails and beyond
    - » No clear discharge date/time
    - » Release not correlated to clinical condition
    - » Housing options frequently suboptimal in supporting recovery
    - » Variability in provision of substance use disorder treatment with medications

Source: <https://store.samhsa.gov/sites/default/files/d7/priv/sma16-4998.pdf>

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### COMMUNITY OPPORTUNITIES TO MINIMIZE INCARCERATION

- » Early identification of individuals with mental and substance use disorders at all points of contact with the justice system – pre-arrest, booking, adjudication, reentry.
- » Use of screening and assessment to ensure linkage with evidence-based treatment, services and supports.
- » Diversion of individuals from the justice system into home- and community-based treatment.
- » Engaging law enforcement, first responders, and crisis management teams, justice court personnel, and community treatment providers in diversion strategies that meet both clinical and public safety needs.

Source: <https://store.samhsa.gov/sites/default/files/d7/priv/sma16-4998.pdf>

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## COMMUNITY OPPORTUNITIES TO MINIMIZE INCARCERATION CONT.

- » Provision of training and technical assistance for law enforcement officers, juvenile and family court judges, probation officers, and other judicial decision-makers on behavioral health issues; and conversely, training for behavioral health treatment providers on criminogenic risk and the criminal and juvenile justice system.
- » Provision of an array of services and supports to enable successful reentry into the community for those transitioning from incarceration or detention including housing.
- » Assurance of equitable opportunities for diversion and linkage to community services and supports for all populations in order to decrease disproportionate minority contact with the justice system.
- » Promotion of cross-sector collaboration to better serve these populations dually involved with the behavioral health and criminal justice systems.

Source: <https://store.samhsa.gov/sites/default/files/d7/priv/sma16-4998.pdf>

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## TIME FOR A POLL

**Statement: My organization has an active working process to identify and provide a soft landing into the community for patients with complex care management needs related to addiction and HIV upon release from carceral settings.**

- A. Yes
- B. No
- C. Not Sure

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## CHEMSEX

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## CHEMSEX

### Definition:

Chemsex (also known as sexualized drug use – SDU) is the **use of drugs to enhance sexual experience**. Common drugs used include methamphetamine, gamma-hydroxybutyrate (GHB), gamma-butyrolactone (GBL), cocaine, ketamine, poppers (amyl nitrite) or cannabis (the latter two gave rise to the term SDU).

### What You Should Know:

- Chemsex is popular among some gay, bisexual, transgender, and queer persons, **but can be experienced by persons of any gender**
- Chemsex participants have higher odds of condomless anal sex with partners of different or unknown HIV status (bareback sex)
- Persons engaged in Chemsex have greater risk of acquiring sexually transmitted infections (STIs) and hepatitis C (HCV)
- Participants are at higher risk of HIV transmission
- The association with sexual risk indicates the importance of promoting harm reduction among this population (e.g., condoms, PrEP, PEP, drug knowledge).

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## CHEMSEX

### Common Terminology Used to Communicate the Desire to Engage in Chemsex

Injecting	Meth	GHB	Ketamine	ChemSex
Pointing, slamming, darts	Blowing clouds, Cloudy, ice cream, tea, T, tina	Water, Gina, Swirling	K, Special K	Party, PNP, Party and play
				
				

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## IMPACT OF CHEMSEX DRUGS

» Engaging in chemsex can be managed by some. This can mean that there is minimal impact on an individual's general wellbeing, work, relationships with partners, friends, and family.

» For others it can prove problematic, and individuals may experience:

- impaired decision making
- it dominates social life and free time
- can lead to chaotic sexual encounters
- sexual boundaries are often crossed while high
- issues around sexual consent
- impact on sexual health: Hep C, HIV, as well as other STI's
- behaviors associated with addiction
- impact on mental health
- health issues associated with injecting drugs
- being vulnerable to mental and physical harm by others
- isolation
- unmanageable comedowns
- suicidal ideation
- an impact on work performance
- a breakdown of personal relationships

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## METHAMPHETAMINE AND ITS IMPACT ON HIV INFECTION

Methamphetamine use:

- » Increases sexual desire, impairs judgment, and provides energy and confidence to engage in sexual activity for long periods of time (hyper-sexual)
- » Causes erectile dysfunction
- » Causes mucosal dryness
- » Decreases adherence to HIV treatment and medical follow-up
- » Increases HIV replication
- » Accelerates progress of HIV-related dementia

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## DOES METHAMPHETAMINE ACCELERATE HIV AND HCV?

- » In test tube studies, when methamphetamine is added to immune cells, it significantly increases HIV replication
  - » Particularly in CD4 cells and monocytes (white blood cells)
- » In mouse models, methamphetamine activated a portion of the HIV genetic code (long terminal repeat – LTR), prompting cells to release a protein tied to more rapid HIV disease progression
- » The Journal of Viral Hepatitis published a study indicating that methamphetamine increases Hepatitis C replication.

Source: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2675873/>

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# HIV AND HEPATITIS C

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## HIV AND HEPATITIS C CO-INFECTIONS

Hepatitis C and HIV are often-overlooked consequences of America's opioid crisis.

**EIGHT IN TEN** new Hepatitis C infections in the U.S. are transmitted through injection drug use.

Nearly **ONE IN TEN** new HIV infections in 2015 were due to injection drug use.

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## HIV AND HEPATITIS C CO-INFECTIONS

- >> In 2023 in Minnesota, there were 31,942 chronic cases of HCV
- >> 8,140 Co-infected for HIV and HCV
- >> The U.S. Public Health Service/Infectious Diseases Society of America guidelines recommend that all HIV-infected persons be screened for HCV infection (CDC, 2014).

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## HIV AND HEPATITIS C CO-INFECTIONS

**Nine states** represent more than half, or **52%** of all people living with Hepatitis C nationwide.

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## Slide 42

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**SR0**    [@Charles Robbins] can I get this reference? I'd like to use this for SOC.  
Shannon Robinson, 2024-01-05T23:20:48.703

**SR0 0**   [@Charles Robbins] I couldn't find this in Hep Vu and was wondering if it came from a specific publication that could be referenced or if more up to date data was available.  
Shannon Robinson, 2024-01-05T23:26:56.214

# SUBSTANCE USE DISORDER TREATMENT WITH MEDICATIONS

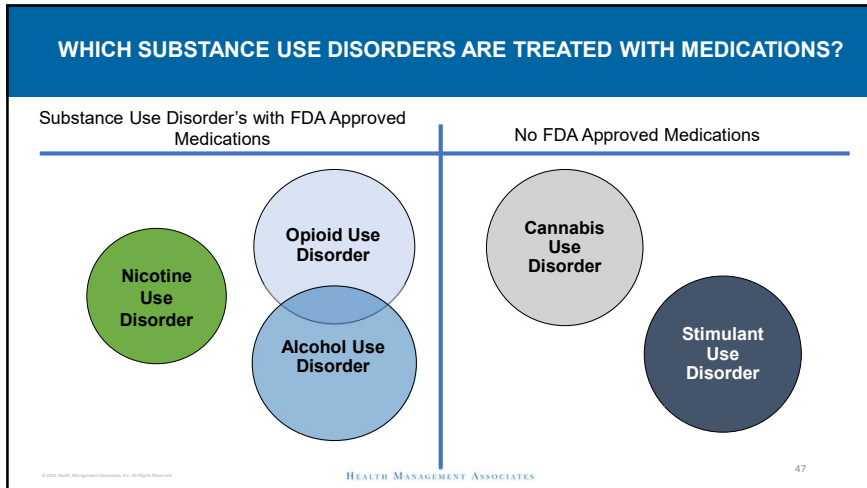
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## WHAT IS SUBSTANCE USE DISORDER TREATMENT WITH MEDICATIONS?

- » The use of FDA-approved prescription medications, usually in combination with counseling and behavioral therapies, to provide a whole-person approach to the treatment of substance use disorders (SUD).
- » When discussing medication for opioid use disorder this is frequently referred to as Medications for Opioid Use Disorder (MOUD).
- » MOUD has proven clinically effective to alleviate symptoms of withdrawal & reduce cravings. MOUD maintenance has been proven to cut overdose rates in half and decrease rates of HIV and hepatitis C transmission.
- » Research shows that a combination of MOUD and behavioral therapies is a successful method to treat OUD.

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## WHY IS MOUD IMPORTANT?

Treat Withdrawal	Address Dopamine Depletion	Treat OUD/Achieve Results
<ul style="list-style-type: none"> <li>• Muscle pain, dilated pupils, nausea, diarrhea, abdominal cramping, piloerection</li> <li>• Lasts 3-14 days</li> <li>• Methadone or buprenorphine are recommended over abrupt cessation due to risk of return to use, overdose (OD) &amp; death</li> </ul>	<ul style="list-style-type: none"> <li>• Reward/motivation pathway abnormalities persists for months after people stop using</li> <li>• Treated with methadone or buprenorphine</li> </ul>	<ul style="list-style-type: none"> <li>• Abstinence based treatment results in 85% using opioids within 1 year</li> <li>• MOUD decreases                             <ul style="list-style-type: none"> <li>• Use</li> <li>• Craving</li> <li>• Complications from IVDU</li> <li>• Criminal behavior</li> </ul> </li> <li>• MOUD increases retention in treatment</li> </ul>

Sources: ASAM. (2020) National Practice Guidelines for the Treatment of OUD. Mattick, RP & Hall W (1996) Lancet 347: 8994, 97-100. Mattick, RP et al. (2008) Cochrane Systematic Review. Mattick, RP et al. (2009) Cochrane Systematic Review. Lobmaier, P et al. (2008) Cochrane Systematic Review. Kupstsky et al. (2011) Lancet 377, 1596-13. Kakko et al. (2003) Lancet 361(9358):662-6. Rich, JD, et al. (2015) Lancet

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### FDA APPROVED MEDICATION FOR OUD

**Agonist Treatment**  
(turns on the receptor):

- Methadone- approved for cough in 1940s, for OUD 1972
- Buprenorphine (Suboxone™ & Subutex™)- approved in 1981 for pain; oral approved for OUD 2002, patch, implants & injection later

**Antagonist Treatment**  
(blocks receptor from turning on):

- Naltrexone (Revia™)- oral approved 1984; injectable (Vivitrol™) 2006 for AUD, 2010 for OUD
- Naloxone- approved 1971, autoinjector 2014, nasal spray (Narcan™) 2015
- Nalmefene™ - injectable approved 1995; nasal spray approved 2023

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### HOW DO THE FDA APPROVED MEDICATIONS WORK?

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### FULL, PARTIAL, OR NO EFFECT

• Buprenorphine, naloxone, and naltrexone can all cause precipitated withdrawal.

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### METHADONE: WHAT AND FOR WHOM?

- » Mu opioid receptor agonist
  - » No "ceiling effect"
- » Can start prior to being in withdrawal
- » Reaching a therapeutic dose takes time
  - » <60 mg/d is not therapeutic
  - » Typical dose 60-120 mg/d
  - » Increased frequency and daily dose required during pregnancy
- » Several drug-drug interactions
- » Illegal to write prescription for methadone to treat OUD unless:
  - » Narcotic Treatment Program (NTP)
  - » Covering a gap of no more than 3 days
  - » Patient is in a DEA licensed clinic or hospital

Patients with a more severe OUD, such as injecting opioids

Patients who have not reached treatment goals with other MOUD





Patients who would benefit from the closest follow up

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### METHADONE: GENERAL FEDERAL REGULATIONS

 <p>Delivered via observed dosing</p>	<p>Once patient is stable and after 6 weeks, can be given take-home doses (varies by state)</p> 
<p>Highly monitored in a Narcotics or Opioid Treatment Program setting (NTP/OTP)</p> 	<p>Many requirements for treating patients: therapy, toxicology...</p> 


<https://www.federalregister.gov/documents/2024/02/02/2024-01693/medications-for-the-treatment-of-opioid-use-disorder>

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### METHADONE: EFFICACY DATA

- » Methadone resulted in 33% fewer opioid positive toxicology tests compared to those receiving no medication\* when everyone receives psychosocial treatment
- » 4.4x more likely to stay in treatment \*
- » Reduced crime \*
- » Reduced infectious disease\*
- » Reduced death\*\*



Source:  
 \* Matick 2009 Cochrane Review  
 \*\* Wakeman 2020 JAMA Open Network

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### BUPRENORPHINE: WHAT AND FOR WHOM?

- » Partial mu opioid agonist with ceiling effect
  - » Doses >32 mg don't cause greater respiratory effects
  - » Available sublingually alone or in combination w/naloxone and as a long acting- weekly or monthly injections
  - » Different formulations (sub-lingual [SL] or buccal pill/film, injectable)
- » Greater binding affinity than full agonists
  - » Start buprenorphine when client in moderate withdrawal (to avoid causing precipitated withdrawal)
  - » Other opioids are not as effective when buprenorphine is present
  - » Typical dose is 16-32 mg/d
  - » Increased frequency and daily dose required during pregnancy
- » Fewer drug-drug interactions than methadone

[https://downloads.asam.org/sitefinity-production-blobs/docs/default-source/advocacy/letters-and-comments/asam\\_clinical\\_considerations\\_buprenorphine.212-11.pdf](https://downloads.asam.org/sitefinity-production-blobs/docs/default-source/advocacy/letters-and-comments/asam_clinical_considerations_buprenorphine.212-11.pdf)

Opioid use disorder or withdrawal


Patient wants agonist treatment

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### BUPRENORPHINE EFFICACY

- » Rate of return to opioid use for persons taking placebo was 100% vs 25% for persons taking buprenorphine
- » If taking ≥16mg buprenorphine you are 1.82 times more likely to stay in treatment than if on placebo
- » Decreased crime, infectious disease and death\*



Source:  
 NIDA Medications to Treat Opioid Use Disorder Research Report Updated December 2021  
 Matick 2014 Cochrane Review  
 \* Wakeman 2020 JAMA Open Network

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## NALOXONE: OD REVERSAL AGENT AS HARM REDUCTION

- » Mu opioid antagonist
- » Shorter half-life & more rapid onset of action than naltrexone
- » High affinity, competitive binding & displaces agonists
- » Intranasal or intramuscular by bystander
- » May require more than one dose
- » Opioids have longer half-life than naloxone
- » Saves lives; no evidence for increasing drug use
- » Good Samaritan law in MN
- » Available over the counter

In 2019, **77.3%** of 33,084 opioid-involved overdose deaths across 37 states + the District of Columbia had **no evidence of naloxone administration.**

Sources: Quinn, et al. (2022). Naloxone administration among opioid-involved overdose deaths in 38 United States jurisdictions in the State Unintentional Drug Overdose Reporting System, 2019. Drug and alcohol dependence, 235, 109487.

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## NALOXONE DISTRIBUTORS IN MINNESOTA

- » In response to the opioid crisis in Minnesota, the Minnesota Department of Health (MDH) developed **KnowTheDangers.com** to provide clear, fact-based information, access to recovery programs, and essential harm reduction resources.
- » One key resource on the site is the Naloxone Finder, which helps locate naloxone distribution sites.



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## NALOXONE RESOURCES

- » <https://www.health.state.mn.us/communities/opioids/opioid-dashboard/resources.html#naloxone>
- » University of Minnesota Naloxone Resources <https://www.pharmacy.umn.edu/degrees-and-programs/continuing-pharmacy-education/continuing-education-courses/naloxone>
- » Naloxone overdose training and kits free of charge. The following community-based organizations provide Naloxone overdose training and kits free of charge:
- » **Steve Rummier HOPE Network**—Call 952-943-3937 or sign up for training from the [Steve Rummier HOPE Network](#).
- » **Rural AIDS Action Network (RAAN)**—Call 320-257-3036.
- » **Red Door Clinic**—Call 612-543-5555.
- » **Indigenous Peoples Task Force**—Call 612-870-1723.
- » **Lutheran Social Services**—Call 800-582-5260.
- » <https://knowthedangers.com/>

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## TIME FOR A POLL

Do you know if your organization is currently prescribing (or providing) or doing any training on naloxone?

- A. Yes
- B. No
- C. I Don't Know

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### NALTREXONE: WHAT AND FOR WHOM?

- » Mu opioid antagonist with high, competitive binding affinity
- » Does not treat withdrawal or low dopamine levels
- » Must be opioid free x 14 days before starting and/or have completed withdrawal if recently using
- » No evidence of decreased mortality

Patients with a high degree of motivation (dopamine)

Patients with a history of OUD and Alcohol Use Disorder (AUD)

Patients who did not reach treatment goals with methadone or buprenorphine

Can be useful for occasional use or after discontinuation of methadone or buprenorphine

Source: Laroche, et al. Medication for opioid use disorder after nonfatal opioid overdose and association with mortality. A cohort study. *Annals of Internal Medicine*. 1993 (2018) 137-45. Wakeman, SE, et al. (2020) Comparative Effectiveness of Different Treatment Pathways for Opioid Use Disorder. *JAMA Open Network*. 3 (2).

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### NALTREXONE: GENERAL REGULATIONS

No Federal regulations inhibit the use

Not all BH clinics have RN to give injections

Multiple formulations:  
 -Pills at 25mg and 50 mg (50-100 mg for AUD)  
 -Long acting injectable 380mg (28-30 days) for AUD and OUD

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### NALTREXONE: EFFICACY DATA

- » Extended Release (XR) Naltrexone 90% opioid abstinence toxicology tests vs. 35% placebo\*
  - » Decreased incarceration\*\*
- » XR Naltrexone vs usual care in HIV clinic\*\*\*
  - » Fewer days of opioid use for those on XR Naltrexone

This Photo by Unknown Author is licensed under CC BY

Source:  
 \*Krupitsky 2011 Lancet  
 \*\*Minocci 2011 Cochrane Review  
 \*\*\* Korthuis 2022

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### HOW LONG TO TREAT OUD?

- » Studies of all FDA approved meds for OUD indicate a risk of return to opioid use upon discontinuation of meds
- » **Year(s) post sobriety**, if making appropriate changes to decrease likelihood of future substance use, stable in recovery and life and wants to discontinue
  - » Social Support that supports recovery
    - » Active in 12 step meetings or
    - » Active in Self-Management and Recovery Training (SMART) meetings or
    - » Active in church
    - » Not living with people who are using
  - » Able to handle interpersonal conflicts without returning to use
  - » Avoid tapering during big life transitions such as leaving incarceration, pregnancy or delivery, moving across the country, changing jobs

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## TO TAPER OR NOT TO TAPER?

Evidence is clear that long-term or indefinite treatment with medications for OUDs is often required for effective and sustained outcomes<sup>1</sup>

In practice, successful tapers from methadone or buprenorphine typically occur in only about 15 percent of cases<sup>2,3</sup>

According to the U.S. Surgeon General, successful tapers typically occur, if at all, when individuals have been treated with Medicated Assisted Treatment (MAT) for at least 3 years<sup>4</sup>

- National Academy of Sciences, Engineering, and Medicine. (2019). *Medications for opioid use disorder save lives*. Washington, DC: The National Academies Press.
- Stevens, R., Sun, H., Evans, P., Mavris, D. C., Aday, M. D., Han, Y. L. et al. (2012). Defining opioid patient characteristics of successful tapers following methadone maintenance treatment: Results from a population-based retrospective cohort study. *Addiction*, 107, 1421-1429.
- Substance Abuse and Mental Health Services Administration. (2018). *Medications for opioid use disorder: Treatment improvement protocol (TIP #3) for healthcare and addiction professionals, policy makers, patients and families*. (Op. No. HHS Publication No. SMA 18-5063). Bethesda, MD: Author.
- Substance Abuse and Mental Health Services Administration and Office of the Surgeon General. (2018). *Facing addiction in America: The Surgeon General's spotlight on opioids*. Washington, DC: US Department of Health and Human Services.

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## REFERENCES: OUD MEDICATION

- "Census of Jails (COJ)." Bureau of Justice Statistics, [bjs.ojp.gov/data-collection/census-jails-coj](https://bjs.ojp.gov/data-collection/census-jails-coj). Accessed 17 Jan. 2024.
- Green, T. C. et al. (2018). Postincarceration Fatal Overdoses After Implementing Medications for Addiction Treatment in a Statewide Correctional System. *JAMA psychiatry*, 75(4), 405-407. <https://doi.org/10.1001/jamapsychiatry.2017.4614>
- Healthresearchfunding.org(2019) <https://healthresearchfunding.org/24-opiate-addiction-recovery-statistics/> 24 Shocking Opiate Addiction Recovery Statistics
- <https://www.federalregister.gov/documents/2024/02/02/2024-01693/medications-for-the-treatment-of-opioid-use-disorder>
- Initiative, P. P. (n.d.). Minnesota incarceration pie chart 2023. [www.prisonpolicy.org](https://www.prisonpolicy.org). Retrieved November 15, 2023, from [https://www.prisonpolicy.org/graphs/correctional\\_control2023/MN\\_incarceration\\_2023.html](https://www.prisonpolicy.org/graphs/correctional_control2023/MN_incarceration_2023.html)
- Initiative, P. P. (n.d.). Minnesota profile. [www.prisonpolicy.org/profiles/MN.html](https://www.prisonpolicy.org/profiles/MN.html)
- Initiative, P. P. (n.d.). New data on HIV in prisons during the COVID-19 pandemic underscore links between HIV and incarceration. [www.prisonpolicy.org](https://www.prisonpolicy.org/blog/2023/06/01/hiv_in_prisons). Retrieved November 15, 2023, from [https://www.prisonpolicy.org/blog/2023/06/01/hiv\\_in\\_prisons](https://www.prisonpolicy.org/blog/2023/06/01/hiv_in_prisons)
- Kakko et al. 1-year retention and social function after buprenorphine-assisted relapse prevention treatment for heroin dependence in Sweden: a randomised, placebo-controlled trial. *Lancet* (2003) 361(9358):662-8.
- Korthuis PT, et al. HIV clinic-based extended-release naltrexone versus treatment as usual for people with HIV and opioid use disorder: a non-blinded, randomized non-inferiority trial. *Addiction*. 2022 Jul;117(7):1961-1971. doi: 10.1111/add.15836. Epub 2022 Mar 2. PMID: 35129242; PMCID: PMC9314106.
- Krupitsky, et al. Injectable extended-release naltrexone for opioid dependence: a double-blind placebo controlled, multicenter randomized trial. 2011; *Lancet* 377: 1506-13.
- Larochele, et al. Medication for opioid use disorder after nonfatal opioid overdose and association with mortality. A cohort study. *Annals of Internal Medicine*. 169:3 (2018) 137-45.

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66

## REFERENCES: OUD MEDICATION

- Lim S;Cherian T;Katyal M;Goldfeld KS;McDonald R;Wiewel E;Khan M;Krawczyk N;Braunstein S;Murphy SM;Jalali A;Jeng PJ;MacDonald R;Lee JD; Association between Jail-Based Methadone or Buprenorphine Treatment for Opioid Use Disorder and Overdose Mortality after Release from New York City Jails 2011-17. *Addiction (Abingdon, England)*, U.S. National Library of Medicine, pubmed.ncbi.nlm.nih.gov/36305669/. Accessed 17 Jan. 2024.
- Mattick, RP, et al. (2009) Methadone maintenance therapy versus no opioid replacement therapy for opioid dependence. *Cochrane Systematic Review*.
- Mattick, RP, et al. (2014) Buprenorphine maintenance versus placebo or methadone maintenance for opioid dependence. *Cochrane Systematic Review*.
- Metzger DS et al., Human Immunodeficiency Virus Seroconversion Among Intravenous Drug Users In- and Out-of-Treatment: An 18-Month Prospective Follow-Up, *Journal of Acquired Immune Deficiency Syndromes* 6, no. 9 (1993): 1049-56, <http://www.ncbi.nlm.nih.gov/pubmed/8340896>.
- MINNESOTA DEPARTMENT OF CORRECTIONS. (n.d.). Retrieved November 15, 2023, from [https://mn.gov/doc/assets/Adult%20Prison%20Population%20Summary%207-1-2023\\_tcm1089-589994.pdf](https://mn.gov/doc/assets/Adult%20Prison%20Population%20Summary%207-1-2023_tcm1089-589994.pdf)
- Minozzi S, Amato L, Vecchi S, Davoli M, Kirchmayer U, Verster A. Oral naltrexone maintenance treatment for opioid dependence. *Cochrane Database Syst Rev*. 2011;2011(4):CD001333. Published 2011 Apr 13. doi:10.1002/14651858.CD001333.pub4
- NIDA Medications to Treat Opioid Use Disorder Research Report Updated December 2021.
- Principals of Drug Addiction Treatment: A Research Based Guide." National Institute on Drug Abuse. Ed. NIDA International Program.
- Rich, JD, et al. Continuation versus forced withdrawal on incarceration in a combined US prison and jail: a randomised, open-label trial. *Lancet* (2015) 386 (9991): 350-359.
- Quinn, et al. (2022). Naloxone administration among opioid-involved overdose deaths in 38 United States jurisdictions in the State Unintentional Drug Overdose Reporting System, 2019. *Drug and alcohol dependence*, 235, 109467.

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## REFERENCES: OUD MEDICATION

- Schwartz RP, et al. Opioid agonist treatments and heroin overdose deaths in Baltimore, Maryland, 1995-2009. *Am J Public Health*. 2013 May;103(5):917-22. doi: 10.2105/AJPH.2012.301049. Epub 2013 Mar 14. PMID: 23488511; PMCID: PMC3670653
- Substance Abuse Mental Health Services Agency. Medications for Opioids Use Disorder: For Healthcare and Addiction Professionals, Policymakers, Patients and Families. Rockville MD SAMHSA Treatment Improvement Protocol (TIP) Series, No. 63 (2021).
- The ASAM National Practice Guideline for the Treatment of Opioid Use Disorder: 2020 Focused Update. (2020) *J Addict Med*14(2S Suppl 1):1-91. doi: 10.1097/ADM.0000000000000633. Erratum in: *J Addict Med*. 2020 May/Jun;14(3):267. PMID: 32511106.
- Treatment Research Institute (TRI), Ed. "Cost Utilization Outcomes of Opioid Dependence Treatment" *American Journal of Managed Care* 2011.
- Tsui, Ji et al., "Association of Opioid Agonist Therapy With Lower Incidence of Hepatitis C Virus Infection in Young Adult Injection Drug Users," *JAMA Internal Medicine* 174, no. 12 (2014): 1974-81, <http://archinte.jamanetwork.com/article.aspx?articleid=1918926>
- United States Department of Justice. Office of Justice Programs. Bureau of Justice Assistance. Guidelines For Managing Substance Withdrawal In Jails A Tool for Local Government Officials, Jail Administrators, Correctional Officers, and Health Care Professionals. June 2023
- Wakeman, SE, et al. (2020) Comparative Effectiveness of Different Treatment Pathways for Opioid Use Disorder. *JAMA Open Network*. 3 (2).
- Weimer MB, Herring AA, Kawasaki SS, Meyer M, Kleykamp BA, Ramsey KS. ASAM Clinical Considerations: Buprenorphine Treatment of Opioid Use Disorder for Individuals Using High-potency Synthetic Opioids. *J Addict Med*. 2023 Nov-Dec 01;17(6):632-639. doi: 10.1097/ADM.0000000000001202. Epub 2023 Jul 28. PMID: 37934520.
- [www.druginserts.com](http://www.druginserts.com)

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### WHY MEDICATIONS FOR ALCOHOL USE DISORDER IS IMPORTANT?

Increased retention in treatment

Decreased drinking

Disulfiram

Naltrexone (oral and intramuscular)

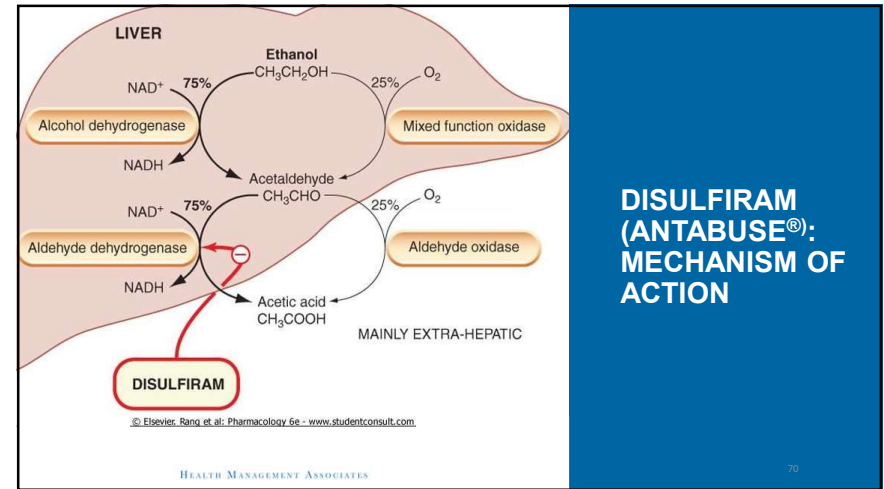
Decreased cravings

Decreased healthcare costs

Acamprosate

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### DISULFIRAM FOR ALCOHOL USE DISORDER (AUD)

- » Approved decades ago; most recent data does NOT show overwhelming efficacy\*
- » Once per day dosing
- » Inhibits multiple P450 and other liver enzymes
- » Drug Interactions: benzodiazepines, phenytoin, pimozone, tricyclic antidepressants (TCAs), warfarin, sulfonylureas, metronidazole, amoxicillin, isoniazid
- » Contraindications/precautions: alcohol use, hypersensitivity to rubber, severe coronary artery disease (CAD), cirrhosis, severe renal impairment, psychosis, depression, diabetes mellitus (DM), epilepsy
- » Extensively metabolized
- » Extensive list of side effects

Source: \* McPheeters M, O'Connor EA, Riley S, Kennedy SM, Voisin C, Kuznacik K, Coffey CP, Edlund MD, Bobashev G, Jonas DE. Pharmacotherapy for Alcohol Use Disorder: A Systematic Review and Meta-Analysis. JAMA. 2023 Nov 7;330(17):1653-1665. doi: 10.1001/jama.2023.19761. PMID: 37934220; PMCID: PMC10639900.

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### NALTREXONE FOR ALCOHOL USE DISORDER

- Few side effects
- Drug Interactions: opioids
- » No P450 interactions
- Contraindications: severe acute hepatitis
- Well studied in mild and moderate cirrhosis
- Safe in mild renal disease

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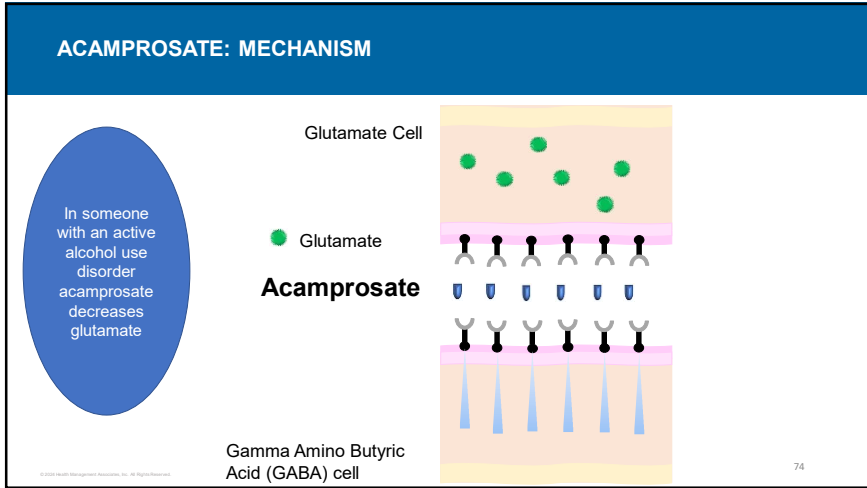
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### NALTREXONE EFFICACY

	Oral	Intramuscular
Reduced drinking days	Yes	Yes
Reduced heavy drinking days	Yes	Yes
Decreased opioid use	Yes	Yes
Decreased cravings	Yes	
Increased time to first drink	Yes	Yes
Treatment retention	Higher	Highest
Discontinuation of medication		Lower than oral
Decreased ED visits		Lower than oral
Decreased hospitalizations		Lower than oral
Decreased pharmacy cost		Lower than oral
Decreased nonpharmacy costs		Lower than oral

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- ### ACAMPROSATE FOR ALCOHOL USE DISORDER
- » Effective
    - » Decreased quantity and frequency
    - » Increased retention in treatment and abstinence
  - » Three times per day dosing
  - » Drug Interactions: none
  - » Contraindications: severe renal impairment
    - » Dose reduce if someone has moderate renal impairment (creatinine clearance 30-50ml/m) to 333mg three times a day (TID)
  - » Few side effects
  - » No metabolism
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## TIME FOR A POLL

**Question:**

**Do you know anyone on medication for Alcohol Use Disorder?**

A. Yes  
B. No

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## REFERENCES: AUD MEDICATION

- » Ademar K, Loftén A, Nilsson M, Domi A, Adermark L, Söderpalm B, Ericson M. Acamprosate reduces ethanol intake in the rat by a combined action of different drug components. *Sci Rep.* 2023 Oct 19;13(1):17863. doi: 10.1038/s41598-023-45167-3. PMID: 37857829; PMCID: PMC10587117.
- » Kalk NJ, Lingford-Hughes AR. The clinical pharmacology of acamprosate. *Br J Clin Pharmacol.* 2014 Feb;77(2):315-23. doi: 10.1111/bcp.12070. PMID: 23278595; PMCID: PMC4014018.
- » McPheeters M, O'Connor EA, Riley S, Kennedy SM, Voisin C, Kuznacic K, Coffey CP, Edlund MD, Bobashev G, Jonas DE. Pharmacotherapy for Alcohol Use Disorder: A Systematic Review and Meta-Analysis. *JAMA.* 2023 Nov 7;330(17):1653-1665. doi: 10.1001/jama.2023.19761. PMID: 37934220; PMCID: PMC10630900.
- » Substance Abuse and Mental Health Services Administration and National Institute on Alcohol Abuse and Alcoholism, Medication for the Treatment of Alcohol Use Disorder: A Brief Guide. HHS Publication No. (SMA) 15-4907. Rockville, MD: Substance Abuse and Mental Health Services Administration, 2015.
- » Wong, J., Saver, B., Scanlan, J. M., Gianutsos, L. P., Bhakta, Y., Walsh, J., ... & Rudolf, V. (2020). The ASAM clinical practice guideline on alcohol withdrawal management. *Journal of Addiction Medicine, 14*(3S), 1-72.

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## 5-MINUTE STRETCH BREAK!



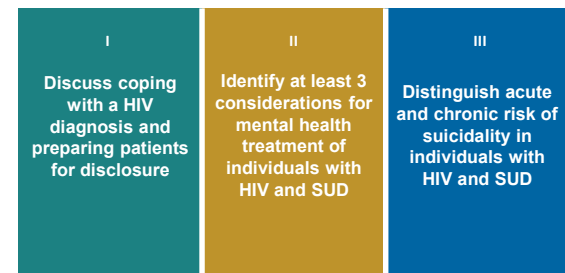
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## COUNSELING FOR CO-OCCURRING HIV & SUD

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## LEARNING OBJECTIVES: COUNSELING FOR CO-OCCURRING HIV & SUD



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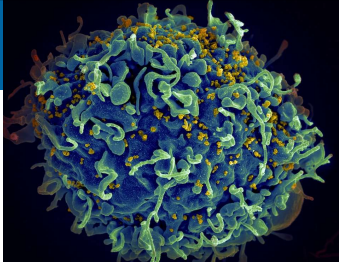
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### WHY IS IT IMPORTANT TO ADDRESS SUD IN PERSONS WITH HIV?

**Substance use accelerates the progression of HIV**

- » Increases viral load
- » Increases likelihood of AIDs related morbidity (even when adherent to antiretroviral medications)
- » Decreases medication adherence



Sources: Dash, 2015; Schaffer 2017; Strazza 2011; Dahal 2015; Andriole 2012; NIDA 2021 <https://www.drugabuse.gov/publications/research-reports/common-comorbidities-substance-use-disorders/>  
Photo Source: National Cancer Institute on Unsplash


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### WHY IS IT IMPORTANT TO ADDRESS SUD IN PERSONS WITH HIV?

**Addictive substances weaken the blood brain barrier**

- » Allowing HIV to more easily enter the brain
- » Allows infection and damage to nerves and supporting cells (glia)
- » Triggers release of neurotoxins
- » Can lead to dementia
  - » 50% of people with HIV have neurocognitive disorders




Sources: Dash, 2015; Schaffer 2017; Strazza 2011; Dahal 2015; Andriole 2012; NIDA 2021 <https://www.drugabuse.gov/publications/research-reports/common-comorbidities-substance-use-disorders/>  
Photo Source: Milad Fakurian on Unsplash

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### HIV TESTING

- » 19% of 15-44yo in the United States were tested for HIV in the past year
- » Only one-third of SUD programs offer onsite HIV testing



Sources: NIDA 2021 <https://www.drugabuse.gov/publications/research-reports/common-comorbidities-substance-use-disorders>  
Substance Abuse and Mental Health Services Administration. (2021). Treating Substance Use Disorders Among People with HIV. Advisory  
Photo Source: Testalizer.me on Unsplash

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### HIV TESTING RECOMMENDATIONS

- ✓ SAMHSA recommends universal HIV testing for
  - » Persons 15-65yo (and all pregnant persons)
  - » Younger and older persons at increased risk, such as:
    - » People who inject drugs
    - » People who have condomless sex
    - » People who participate in commercial sex work
- ✓ US Preventative Task Force Rating A
  - » Requires Medicare and Medicaid to pay for testing
  - » Rapid tests are available- results within 30 minutes
  - » Provide pre and post test counseling- reviewed in other talks

Sources: NIDA 2021 <https://www.drugabuse.gov/publications/research-reports/common-comorbidities-substance-use-disorders>  
Substance Abuse and Mental Health Services Administration. (2021). Treating Substance Use Disorders Among People with HIV. Advisory.

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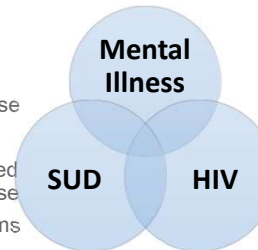
## Slide 86

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**SR0**    [@Gabriel Velazquez] yes, please add this poll  
Shannon Robinson, 2024-11-11T22:03:14.636

## SUD, HIV AND MENTAL ILLNESS

- » 54% report moderate to high-risk cannabis use
  - » 40% report moderate to high-risk drinking
  - » 12% report moderate to high-risk cocaine
  - » 11% reported moderate to high risk of amphetamine use
- 
- » Only 35% of people in 10 outpatient HIV clinics reported talking to primary care provider (PCP) about alcohol use
  - » < 50% of providers in hospital-based HIV care programs conducted recommended screening and brief interventions for reducing alcohol



Sources: Staruss, S.M. 2009  
Andriote, JM. 2012  
Dawson Rose 2017

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## COUNSELING: COPING WITH AN HIV DIAGNOSIS

- » Coping with the diagnosis of HIV
  - » is a form of grieving
  - » is different from having a major depressive episode
  - » may require treatment
    - » support or psychotherapy
    - » will not respond to antidepressants



Sources: Andriote, JM. 2012 <http://www.waldmap.com/news/aug-2021/hardest-outcome-all-hiv-and-suicide>  
Photo Source :LinkedIn Sales Solutions on Unsplash

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## COUNSELING RECOMMENDATIONS

1. Don't try to solve or fix things, but....
  - Housing is important
  - Social support is important
  - Medical care is important
  - These things helps establish a sense of control over one's life
2. Don't minimize someone's feelings
3. Don't tell people to pull themselves together
4. Listen... for risks and for talk of the future

Sources: Andriote, JM. 2012 <http://www.waldmap.com/news/aug-2021/hardest-outcome-all-hiv-and-suicide>

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## CONSIDERATIONS FOR MENTAL HEALTH TREATMENT OF INDIVIDUALS WITH HIV AND SUD

- » Major Depression, among those living with HIV, responds to the same treatments:
  - » Evidence-based psychotherapy
  - » Evidence-based medications
- » As with other conditions, keep drug-drug interactions in mind
- » Depression & bipolar disorder can make medication adherence challenging

ANTIDEPRESSANT TREATMENT OF DEPRESSION  
RESULTS IN LOWER HEALTHCARE COSTS

- » Persons with bipolar disorder and HIV are more likely to have unprotected intercourse with HIV negative partners
- » The risk of suicide is higher for those with HIV (at all stages) as compared to the general population

Sources: Andriote, JM. 2012 & Blank MB 2013

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### SUD TREATMENT FOR THOSE LIVING WITH HIV

- » Cognitive Behavioral Therapy (CBT) & Motivational Interviewing (MI)
  - » Reduce drug use
  - » Reduce high risk sexual behaviors
  - » Reduce viral load
  - » Improve adherence to antiretrovirals

**SUD Treatment is HIV Prevention!**

Source: NIDA 2021 <https://www.drugabuse.gov/publications/research-reports/common-comorbidities-substance-use-disorders>

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### SUD TREATMENT FOR THOSE LIVING WITH HIV

- » Opioid Use Disorder
  - » Methadone and buprenorphine are associated with a 54% reduction in risk of HIV infection in persons who inject drugs
- » Alcohol Use Disorder (AUD)
  - » Behavioral and medication for AUD
    - » Increase intensity of behavioral treatment led to greater improvements than lower intensity behavioral treatments among those with detectable viral loads
      - » AUDIT C scores improved
      - » Viral loads, CD4
      - » Adherence
    - » Medication for AUD was associated with
      - » Increased CD4 among those with detectable viral loads
      - » Increased adherence among those with detectable and undetectable viral loads

Source: NIDA 2021 <https://www.drugabuse.gov/publications/research-reports/common-comorbidities-substance-use-disorders>; McGinnis KA, et al. Impact of behavioral and medication treatment for alcohol use disorder on changes in HIV-related outcomes among patients with HIV: A longitudinal analysis. Drug Alcohol Depend. 2020 Dec; 1217:108272. doi: 10.1016/j.drugalcdep.2020.108272. Epub 2020 Sep 11. PMID: 32971391; PMCID: PMC7757793.

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### EPIDEMIOLOGY- SUICIDALITY & HIV

Suicide

- » 3rd most common cause of death in 15-29yo women
- » 4th most common cause of death in 15-29yo men
- » No relationship to income
- » A life-threatening illness is a one of the most strongly predictive factors for completed suicide
- » Suicide rate in the first year after an HIV diagnosis is 5x the rate in the general population. Suicide in the first year after an HIV diagnosis accounts for 40% of all suicide in persons with HIV.

**Suicide Attempt Rate**

*People living with HIV: 16%*

*General Population: 3%*

**Suicidal Ideation Rate**

*People living with HIV: 23%*

*General Population: 9%*

Sources: <http://www.waldmap.com/news/aug-2021/hardest-outcome-all-hiv-and-suicide> <https://www.health.state.mn.us/people/syringe/suicide.pdf>

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## TIME FOR A POLL

**Question:**

**People who talk about suicide, do not have attempts or complete suicide.** SRO

A. True  
B. False

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## Slide 96

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**SR0**    [@Gabriel Velazquez] I updated the verbiage in this poll. Just want to make sure that you update it prior to the presentation, on the back end of zoom

Shannon Robinson, 2024-11-13T22:11:33.442

**GV0 0**    Thanks for letting me know, I updated it on the back end of Zoom

Gabriel Velazquez, 2024-11-13T22:14:16.405

## RISK FACTORS FOR SUICIDE



**Suicidal Ideation Risk Assessment**  
STEPS AND RESOURCES FOR EXPLORING THOUGHTS OF SUICIDE

<input type="checkbox"/> Trauma	<input type="checkbox"/> Purposeless, hopeless
<input type="checkbox"/> Triggering event- stressor	<input type="checkbox"/> Poor sleep
<input type="checkbox"/> Ideation & past behavior	<input type="checkbox"/> Mood, anxiety, anger, withdrawal
<input type="checkbox"/> Health-medical, mental and substance	<input type="checkbox"/> Reckless, impulsive


Sources: <https://www.health.state.mn.us/people/yrtingel/suicide.pdf>

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## ASSESSMENT FOR SUICIDALITY

- » Which factors can be modified to reduce risk?
  - » Opportunities for healing
  - » Reduce harms
- » Protective factors
  - » Connectedness
  - » Support
  - » Skills- problem solving, coping, healing



Sources: <https://www.health.state.mn.us/people/yrtingel/suicide.pdf>  
Photo Source: Glenn Carstens-Peters on Unsplash

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## ASSESSMENT RECOMMENDATIONS

1. Be mindful that protective factors are unique to each person
2. Use the person's language
3. Ask open ended questions such as:
  - » What are things that keep you safe?
  - » When this occurred in the past what has stopped you?
  - » Who are the people who lift your spirits?
  - » What activities lift your spirits?
  - » What would you like to develop within yourself in the future?
4. Try to identify protective factors that can be enhanced

Sources: <https://www.health.state.mn.us/people/yrtingel/suicide.pdf>

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## INTEGRATED PRIMARY HIV & BEHAVIORAL HEALTH CARE

Benefits of Integration

- » Increases likelihood of follow through on referrals
- » Improve physical health outcomes
- » Increased savings in healthcare cost
- » Reduce emergency room use

Ryan White HIV/ AIDS Treatment Extension Act 2009

- » Aligns with HHS guidelines
- » Mandates include:
  1. Universal depression and SUD screening
    - » MH screening rates currently are between 80%-100%
    - » SUD screening rates currently are much lower
  2. Establishment of follow up plan

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**REFERENCES:**

- Andriote, J. APA Fact Sheet HIV mental health treatment issues HIV and clinical depression 2012
- Andriote. HIV and Clinical Depression APA Fact Sheet 2012, Arlington VA
- Blank MB, Himelthoch S, Walkup J, Eisenberg MM. Treatment considerations for HIV-infected individuals with severe mental illness. *Curr HIV/AIDS Rep.* 2013 Dec;10(4):371-9. doi: 10.1007/s11904-013-0179-3. PMID: 24158425
- Branson BM, et. al. Centers for Disease Control and Prevention (CDC). Revised recommendations for HIV testing of adults, adolescents, and pregnant women in health-care settings. *MMWR Recomm Rep.* 2006 Sep 22;55(RR-14):1-17; quiz CE1-4. PMID: 16988643.
- Dahat S, Chitti SV, Nair MP, Saxena SK. Interactive effects of cocaine on HIV infection: implication in HIV-associated neurocognitive disorder and neuroAIDS. *Front Microbiol.* 2015 Sep 8;6:931. doi: 10.3389/fmicb.2015.00931. PMID: 26441868
- Dash S, Balasubramaniam M, Villalta F, Dash C, Pandhare J. Impact of cocaine abuse on HIV pathogenesis. *Front Microbiol.* 2015 Oct 20;6:1111. doi: 10.3389/fmicb.2015.01111. PMID: 26539167
- Galletly CL, Pinkerton SD, Petroll AE. CDC recommendations for opt-out testing and reactions to unanticipated HIV diagnoses. *AIDS Patient Care STDS.* 2008 Mar;22(3):189-93. doi: 10.1089/apc.2007.0104. PMID: 18290754; PMCID: PMC2728134.
- Gaynes BN, Pence BW, Eron JJ Jr, Miller WC. Prevalence and comorbidity of psychiatric diagnoses based on reference standard in an HIV+ patient population. *Psychosom Med.* 2008 May;70(4):505-11. doi: 10.1097/PSY.0b013e31816aa0cc. Epub 2008 Mar 31. PMID: 18378865
- Hutchinson AB, Farnham PG, Sansom SL, Yaylali E, Mermin JH. Cost-Effectiveness of Frequent HIV Testing of High-Risk Populations in the United States. *J Acquir Immune Defic Syndr* 1999. 2016;71(3):323-330. doi:10.1097/QAI.0000000000000838. **SRO**
- Kessler RC, et al. Lifetime prevalence and age-of-onset distributions of DSM-IV disorders in the National Comorbidity Survey Replication. *Arch Gen Psychiatry.* 2005 Jun;62(6):593-602. doi: 10.1001/archpsyc.62.6.593. Erratum in: *Arch Gen Psychiatry.* 2005 Jul;62(7):768. PMID: 15939837.

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**REFERENCES:**

- McGinnis KA, et. al. Impact of behavioral and medication treatment for alcohol use disorder on changes in HIV-related outcomes among patients with HIV: A longitudinal analysis. *Drug Alcohol Depend.* 2020 Dec 1;217:108272. doi: 10.1016/j.drugalcdep.2020.108272. Epub 2020 Sep 11. PMID: 32971391; PMCID: PMC7757793.
- NIDA 2021 <https://www.drugabuse.gov/publications/research-reports/common-comorbidities-substance-use-disorders>
- NIDA, 2021. <https://www.drugabuse.gov/publications/research-reports/common-comorbidities-substance-use-disorders>
- Rothbard AB, Blank MB, Staab JP, et al. Previously Undetected Metabolic Syndromes and Infectious Diseases Among Psychiatric Inpatients. *Psychiatric services.* 2009;60(4):534-537.
- Schaefer CP, Tome ME, Davis TP. The opioid epidemic: a central role for the blood brain barrier in opioid analgesia and abuse. *Fluids Barriers CNS.* 2017 Nov 29;14(1):32. doi: 10.1186/s12987-017-0080-3. PMID: 29183383
- Strauss SM, Rindskopf DM. Screening patients in busy hospital-based HIV care centers for hazardous and harmful drinking patterns: the identification of an optimal screening tool. *J Int Assoc Physicians AIDS Care (Chic).* 2009 Nov-Dec;8(6):347-53. doi: 10.1177/1545109709350509. Epub 2009 Oct 22. PMID: 19850861
- Strazza M, Pirrone V, Wigdahl B, Nonnemacher MR. Breaking down the barrier: the effects of HIV-1 on the blood-brain barrier. *Brain Res.* 2011 Jul 5;1399:96-115. doi: 10.1016/j.brainres.2011.05.015. Epub 2011 May 14. PMID: 21641584
- Substance Abuse and Mental Health Services Administration and Health Resources and Services Administration, The Case for Behavioral Health Screening in HIV Care Settings. HHS Publication No. SMA-16-4999. Rockville, MD: Substance Abuse and Mental Health Services Administration, 2016.
- Substance Abuse and Mental Health Services Administration. (2021). Treating Substance Use Disorders Among People with HIV. Advisory.

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**STIMULANT USE**

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**LEARNING OBJECTIVES:  
STIMULANT USE AND PERSONS WHO ENGAGE IN CHEMSEX**

<p>I</p> <p>List at least 5 risks associated with methamphetamine usage</p>	<p>II</p> <p>Define and identify at least 2 benefits of contingency management</p>	<p>III</p> <p>Identify at least 3 risk behaviors of persons who engage in Chemsex</p>
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## Slide 101


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**SR0**    `[@Gabriel Velazquez]` can you fix the spacing here?  
Shannon Robinson, 2024-11-11T22:14:13.815



### WHAT ARE STIMULANTS?

- >> Cocaine
- >> "Psychostimulants with abuse potential"
  - >> Mahuang, ephedra & khat- plants
  - >> Pseudoephedrine, ephedrine & cathinone & cathine
  - >> "Bath salts" (synthetic man made cathinones)
  - >> Amphetamine (synthetic)
    - >> Methamphetamine
    - >> Amphetamine
    - >> MDMA/ecstasy = Molly = methylenedioxy-methamphetamine
    - >> Methylphenidate = Ritalin™
  - >> Methylxanthines (naturally occurring)
    - >> Caffeine (coffee)
    - >> Theophylline (tea)
    - >> Theobromine (chocolate)

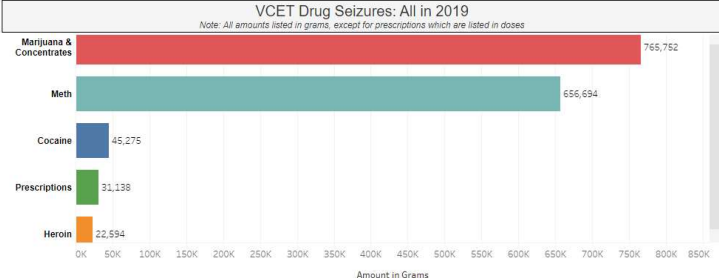


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### DRUG SEIZURES IN MINNESOTA

VCET Drug Seizures: All in 2019  
*Note: All amounts listed in grams, except for prescriptions which are listed in doses*



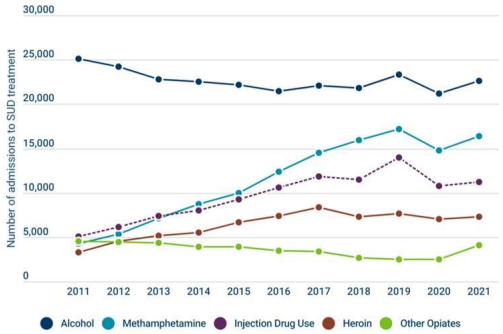
Drug	Amount
Marijuana & Concentrates	765,752 grams
Meth	656,694 grams
Cocaine	45,275 grams
Prescriptions	31,138 doses
Heroin	22,594 grams

Source: Minnesota Department of Public Safety, Violent Crime Enforcement Teams (VCET) Dashboard  
<https://dps.mn.gov/divisions/op/statistical-analysis-center/Pages/vcet-dashboards.aspx>

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### ADMISSIONS TO SUD TREATMENT: MN



Year	Alcohol	Methamphetamine	Injection Drug Use	Heroin	Other Opiates
2011	24,500	4,000	4,500	3,500	3,000
2012	23,500	4,500	5,500	4,500	3,500
2013	22,500	5,500	6,500	5,500	3,500
2014	22,000	7,500	7,500	6,500	3,500
2015	21,500	9,500	8,500	7,500	3,500
2016	21,000	12,500	10,500	8,500	3,500
2017	21,500	14,500	11,500	8,500	3,500
2018	21,000	15,500	11,500	7,500	3,500
2019	22,500	16,500	13,500	7,500	3,500
2020	20,500	14,500	10,500	6,500	3,500
2021	22,000	16,000	10,500	6,500	3,500

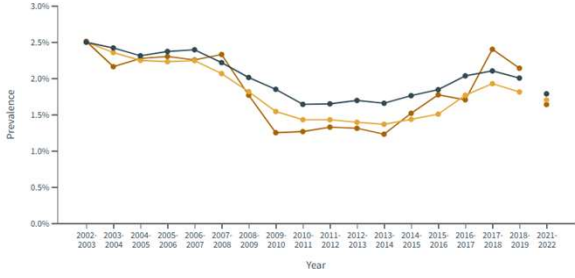
Source: <https://www.health.state.mn.us/communities/opioid/opioid-dashboard/index.html>  
Source: Minnesota Department of Human Services, Drug and Alcohol Abuse Normative Evaluation system (DAANES)

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### COCAINE USE NATIONALLY & LOCALLY

Cocaine Use in Past Year Among Individuals Aged 12 or Older, by Geographic Area

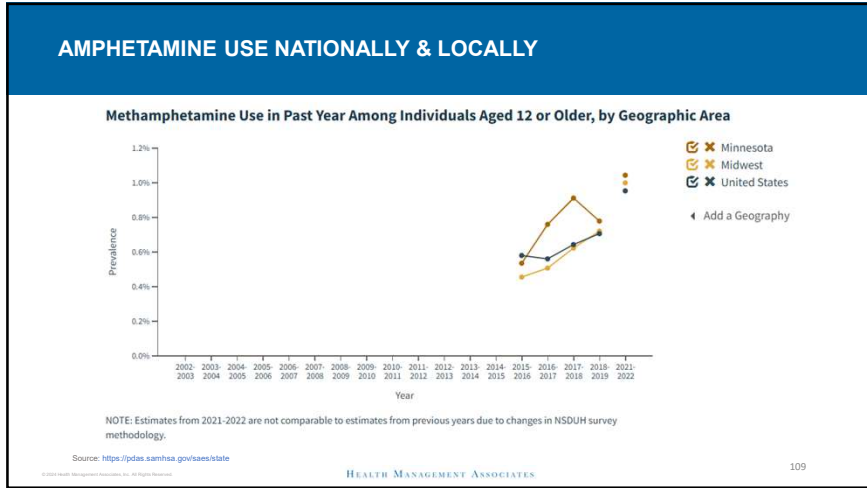


Year	Minnesota	Midwest	United States
2002	2.5%	2.5%	2.5%
2003	2.4%	2.4%	2.4%
2004	2.2%	2.2%	2.2%
2005	2.3%	2.3%	2.3%
2006	2.4%	2.4%	2.4%
2007	2.3%	2.3%	2.3%
2008	2.1%	2.1%	2.1%
2009	1.8%	1.8%	1.8%
2010	1.3%	1.3%	1.3%
2011	1.4%	1.4%	1.4%
2012	1.4%	1.4%	1.4%
2013	1.4%	1.4%	1.4%
2014	1.4%	1.4%	1.4%
2015	1.5%	1.5%	1.5%
2016	1.8%	1.8%	1.8%
2017	2.4%	2.4%	2.4%
2018	2.1%	2.1%	2.1%
2019	2.0%	2.0%	2.0%
2020	1.7%	1.7%	1.7%
2021	1.7%	1.7%	1.7%

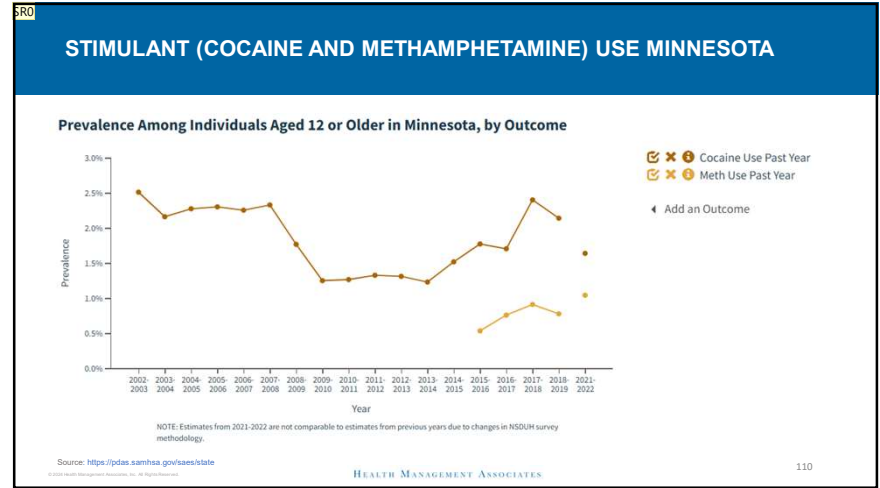
Source: <https://datatools.samhsa.gov/saes/state>

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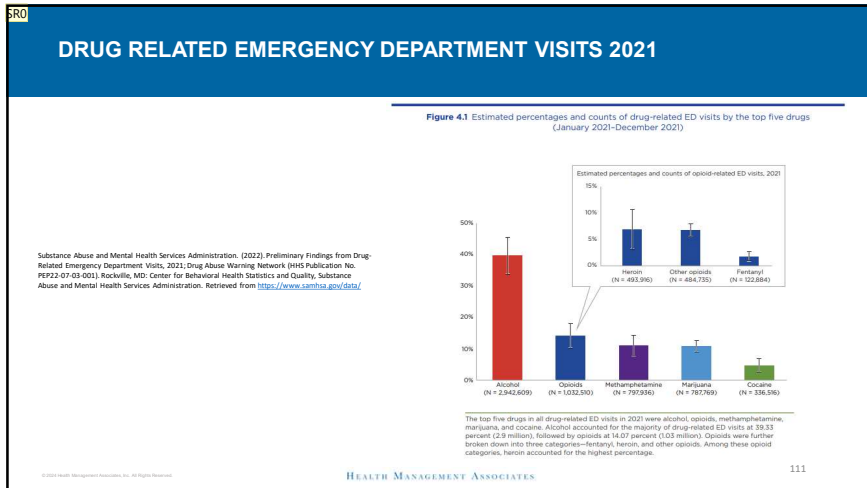
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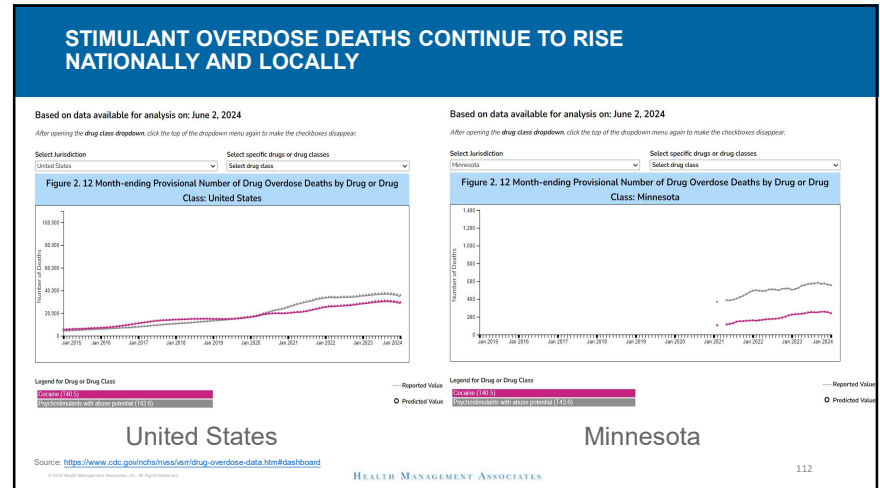
109



110



111



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## Slide 110

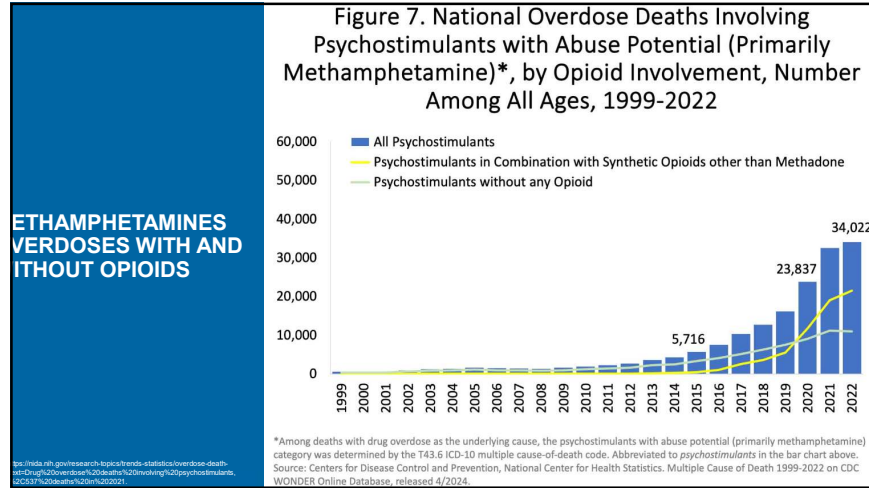
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**SR0**    [@Gabriel Velazquez] any updated data?  
Shannon Robinson, 2024-07-17T16:45:57.816

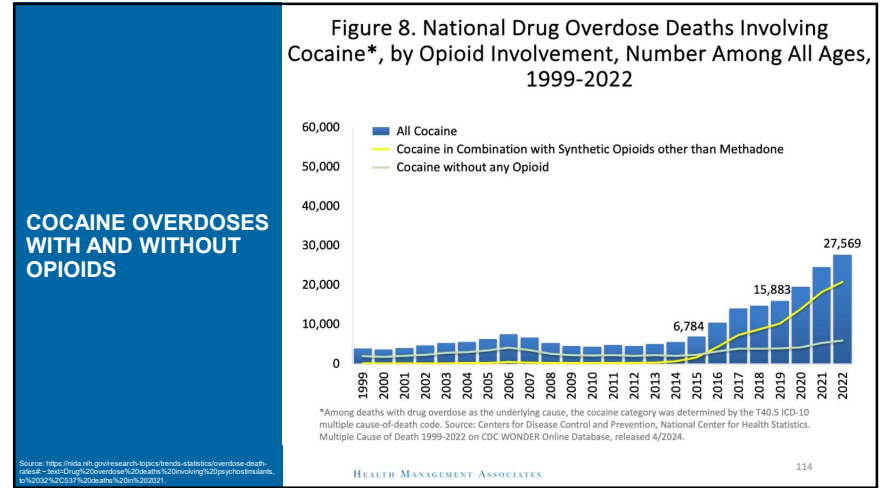
## Slide 111

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**SR0**    [@Shannon Robinson] for next update Shannon can look at DasGupta article- find source of ED data and verify no updated data, because I think there might be updated data.  
Shannon Robinson, 2024-11-11T22:26:44.580



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**IN THE CHAT BOX PLEASE ANSWER THIS QUESTION:**

*Do you prefer:*


**Coffee**

**Tea**

**Chocolate**

**Soda**

*I refuse to pick just one*



115

**MEDICINAL USES FOR STIMULANTS**

- » Cocaine- used as a vasoconstrictor & numbing agent
- » “Psychostimulants with abuse potential”
  - » Ephedra- made into pseudoephedrine and used for allergies and colds
  - » Khat used for depression, obesity, fatigue in middle east
  - » Amphetamines are used for obesity, narcolepsy & Attention Deficit Hyperactivity Disorder (ADHD)
  - » Methylxanthines
    - » Caffeine (coffee)
    - » Theophylline (tea) used for asthma
    - » Theobromine (chocolate)





Amphetamine dosing:  
ADHD 2.5 mg/day to 70mg/ day  
Narcolepsy 5 mg/day to 60 mg/day

Methamphetamine dosing:  
ADHD approved but not commonly used  
5 mg/day to 25 mg/ day

**Illicit use of amphetamines/ methamphetamines up to 1 g / day**

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### SOME CONSEQUENCES ARE DUE TO MODE OF CONSUMPTION

- » Smoking 
  - » Burned lips
  - » Throat problems
  - » Lung problems- acute (50% of those who smoke cocaine) and chronic 
- » Injection (unsafe practices) 
  - » Skin & heart infections
  - » Hepatitis or HIV
- » Snorting 
  - » Sinus infections
  - » Holes in nasal septum
  - » Nosebleeds
  - » Hoarseness

**NOTE:**  
There is cross tolerance from one class of stimulants to another

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### EFFECTS DEPENDENT UPON MODE OF CONSUMPTION

<b>Drug Reaches Brain</b>	}	<ul style="list-style-type: none"> <li>▪ Smoking- 6-8 seconds</li> <li>▪ Injection- seconds</li> <li>▪ Snorting- 15 minutes</li> <li>▪ Oral-45 minutes</li> </ul>
<b>Half-Life</b>	}	<ul style="list-style-type: none"> <li>▪ Cocaine .75-1.5h</li> <li>▪ Bath Salts (Cathinone) .7-2.3 hours</li> <li>▪ Amphetamine 7-34 hours</li> <li>▪ Methamphetamines 6-15 hours</li> </ul>

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## TIME FOR A POLL

**Have you had trouble retaining patients with stimulant use disorders in treatment?**

A. Yes

B. No

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### STIMULANTS EFFECTS ON BRAIN CHEMISTRY

**Cocaine: Reuptake Blocker**  
INDIRECT agonist of  
+ dopamine  
+ norepinephrine  
+ serotonin

**BLOCKS**  
+ neurotransmitters reuptake  
+ sodium channels

**Amphetamines: Releaser**  
INDIRECT agonist of  
+ dopamine  
+ norepinephrine  
+ serotonin

**INHIBITS**  
+ metabolism of neurotransmitters  
+ vesicular storage  
+ reverses reuptake

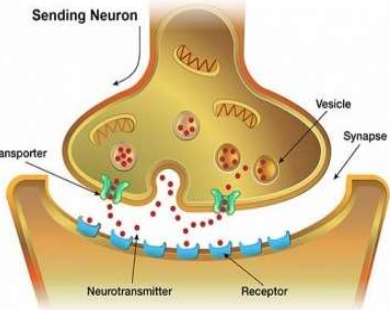


Photo Source: <https://www.drugabuse.gov/news-events/hids-notes/2017/03/impacts-drugs-neurotransmission>

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### ACUTE EFFECTS OF STIMULANTS

- Increased
  - Alertness/vigilance, concentration, mental acuity
  - Energy, movement
  - Sensory awareness & sexual desire
  - Self confidence, grandiosity, anxiety, irritability, paranoia
  - Heart rate & blood pressure, irregular heartbeat, vasoconstriction
  - Breathing rate, temperature, pupil size & blood sugar
  - Electrical activity, seizures
- Euphoria
- Abnormal bowel and bladder function

Toxic effects on muscles including Muscle , tremors, stereotypy (i.e., ritualistic movements)

Decreased  
Brain blood flow & glucose metabolism  
Appetite & sleep  
Judgment & complex multi-tasking

Cardiovascular effects  
Heart attacks  
Arrhythmias  
Severe hypertension  
Strokes

Increased potential for violence and psychosis

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### STIMULANT INTOXICATION: TREAT THE PRESENTING SIGN/SYMPATOM

**Overdose:**  
Seek immediate medical attention for:

- Hypertensive (HTN) crisis
- Cardiac arrhythmias
- Heart attack
- Stroke – Act F.A.S.T.\*
- Psychosis

**Treatment of Overdose**  
Treat HTN with alpha and/ or beta blockers  
Treat arrhythmias with anti-arrhythmics  
Treat vasoconstriction with nitroglycerin

**BH interventions for Overdose**  
Talk down the client in a calm environment  
Treat agitation with benzodiazepine  
Treat psychosis with antipsychotics

\* Facial drooping, Arm weakness, Speech difficulty, Time to call 9-1-1

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### LONG-TERM MENTAL EFFECTS OF ILLICIT STIMULANTS

- » Tolerance to euphoria and appetite suppression
- » Loss of ability to concentrate & severe memory loss
- » Loss of ability to feel pleasure without drug

Day	Value
1	50
2	700
3	50
4	650
5	50
6	500
7	50
8	400
9	50
10	300
11	50
12	250
13	50
14	35
15	50
16	35
17	35
18	40
19	40
20	250
21	40
22	40
23	40
24	40
25	40
26	40
27	40
28	40
29	40
30	40
31	40

- » Paranoia and psychosis (hallucinations & delusions)
- » Insomnia and fatigue
- » Irritability and anger
- » Depression (suicidal ideation)
- » Impulsive, risky sexual behavior

\* Use of stimulants in doses approved by FDA for treatment of medical conditions do not result in these effects

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### LONG TERM PHYSICAL EFFECTS OF ILLICIT STIMULANTS

- » **Dry mouth, severe dental decay & gum problems**
- » **Bruxism (tooth grinding)**
- » Weight loss
- » Increased sweating; oily skin
- » Skin lesions from injection & formication (leading to skin picking)
- » Headaches
- » Movement disorders and seizures
- » **Strokes (bleeding into the brain) & heart attacks**

- » Irregular heart beats
- » Cardiomyopathy
- » Kidney & liver failure
- » Pulmonary hypertension
- » Damaged brain cells
- » Neonatal effects

Strokes & heart attacks are the leading cause of death for stimulant users, even very young users

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### STIMULANTS AND PREGNANCY

- » Pregnancy may increase risk of cardiovascular events
- » Preterm labor
- » Earlier gestational age at delivery
- » Low birth weight
- » Small for gestational age
- » Strokes in utero
- » Secreted in breast milk

**Child:**  
 Dysregulated behavior, growth, inhibitory control, attention and abstract reasoning, but these effects appear to be related to gestational age at delivery, psychiatric disorders, other prenatal exposures and quality of postnatal environment. \*  
 Anxiety, depression at 3-year-old \*\*  
 Worse cognitive function at 7-year-old \*\*

Source: Gouin 2011- cocaine; Kalatzopoulos, 2018  
 \*Smith, M. C., Metz, T. D., & Gordon, A. J. (2019). Stimulant Use in Pregnancy: An Under-recognized Epidemic Among Pregnant Women. *Clinical obstetrics and gynecology*, 62(1), 168-184. <https://doi.org/10.1097/GRF.00000000000000418>  
 \*\*Denof et al. 2007

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### STIMULANT USE IN PREGNANT PEOPLE

- » Pregnancy
  - » During pregnancy stimulant use is more common than opioid use
  - » Cannabis is the most used substance during pregnancy
    - » Followed by stimulants
- » Homelessness and sexual violence predict stimulant use in women...  
 If Post-traumatic Stress Disorder (PTSD) is present
  - » Integrated treatment is more effective for co-occurring disorder (COD)

Sources:  
 - Center for Behavioral Health Statistics Quality. 2015 National survey on drug use and health: Detailed tables In:2016  
 - Riley, ED. Risk factors for stimulant use among homeless and unstably housed adult women. *Drug Alcohol Depend.* 2015 August 1; 153: 173-179. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4510017/pdf/nihms694947.pdf>  
 - Rudless LM, Hien DA, Hu M, Campbell ANG. Associations Between Post-traumatic Stress Symptoms, Stimulant Use and Treatment Outcomes: A Secondary Analysis of NIDA's Women and Trauma Study. *Amer J on Addictions.* Vol 23(1): 90-95. Jan-Feb 2014. <https://onlinelibrary.wiley.com/doi/abs/10.1111/1521-0391.12068.x>

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### CESSATION FROM STIMULANTS

- Acute withdrawal:
  - 4 days
  - No medication recommended
- Symptoms
  - Increased appetite
  - Increased sleep & dreaming
  - Decreased activity & energy
  - Depression & anhedonia
  - Decreased concentration
  - Craving

- Protracted withdrawal
  - Up to 10 weeks
  - No medication recommended
- Lingering effects on the brain; may be permanent
  - Psychosis
  - Movement Disorders
  - Cognitive Issues

Handout: Stimulant Withdrawal: Monitoring & Treatment  
<https://addictionfreeca.org/ffpnseg8rpkqg>

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### AMPHETAMINES AND COGNITIVE IMPAIRMENT

- » Two-thirds of people with amphetamine use disorder have cognitive impairment
- » Impairment is "associated" with:
  - » Older age
  - » Earlier onset of use
  - » Longer duration of use
  - » Greater frequency of use
- » May limit ability to follow through on treatment

- » Damage cell structures
  - » Mitochondria in neurons & microglia
- » Damage DNA
  - » Chromosomal alterations
- » Inflammation of microglia
- » Disruption of blood brain barrier
  - » Inflammatory markers in peripheral blood
- » Cell death

Source: Paulus, M (2020) Neurobiology, clinical presentation, and treatment of methamphetamine use disorder a review. *JAMA Psychiatry* 77(9): 959-66.

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### AMPHETAMINES AND LINGERING EFFECTS ON BRAIN

- » May be permanent even with prolonged abstinence
  - » Attention
  - » Memory
  - » Learning efficiency
  - » Visual- spatial processing
  - » Processing speed
  - » Psychomotor speed
  - » Executive dysfunction

**Cognitive Impairment**  
 Impairs ability to engage in treatment due to trouble

- Sequencing events to get to treatment
- Remembering what is taught
- Applying what is taught

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### TREATMENT OF STIMULANT USE DISORDER

- » Harm Reduction needed due to IV use & risk of fentanyl
  - » Educational materials on psychological & physical effects
  - » Fentanyl test strips
  - » Syringe Exchange/distribution & other clean injection supplies
  - » Naloxone and overdose prevention education
  - » Quiet rooms to come down
  - » Showers & antibiotics for infection prevention & treatment
  - » Condoms & info on safe sex practices
  - » Water for hydration
  - » Toothpaste and toothbrush




Photo sources: Reproductive Health Supplies Coalition, Sara Groblechner, and Giorgio Trovato on Unsplash

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### TREATMENT OF STIMULANT USE DISORDER: SAMHSA EVIDENCE BASED RESOURCE GUIDE

- » Motivational Interviewing (MI)
  - » Decreased days of stimulant use & amount of stimulant used/ day
- » Cognitive Behavior Therapy (CBT)
  - » Decreased quantity of stimulant use & frequency/ week
  - » Decreased risky sexual behaviors
- » Community Reinforcement Approach- see next slide
- » Contingency Management- see next slide

STRONG EVIDENCE FOR THESE AS INDIVIDUAL INTERVENTIONS OR IN COMBINATION APPROACHES

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### TREATMENT OF STIMULANT USE DISORDER

- » Community Reinforcement Approach (CRA)
  - » Decreased addiction severity
  - » Decreased drug use (weeks of use, frequency/week, \$/week)
  - » Increased cocaine abstinence
- » Contingency Management (CM): Strongest Effect Size
  - » Decreased
    - » days of stimulant use
    - » stimulant cravings
    - » HIV risk behaviors
  - » Studies Veterans Administration National Rollout
    - » Pre-CM: compared to 42% completed 2 sessions in 1 year
    - » Post-CM Implementation: 50% completed 14 sessions in 12 week
    - » 92% of >69,000 toxicology tests negative

Sources: SAMHSA Opioid SAM (2013) Warner & DePhillips (2020)

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### HOW DOES CM WORK?

**REMEMBER:**  
Measure objectively & frequently  
Don't set the bar too high or low

- » Select objective target behavior (abstinence)
  - » Define the behaviors
    - » Attendance at clinic (group appt, urine)
    - » Abstinence from DOC? all illicit drugs? prescribed drugs? alcohol?
- » Provide immediate, consistent, tangible, desired rewards for target behavior
- » Escalate size of reward for consistent behavior
- » When target behavior does not occur
  - » Withhold the reward
  - » Reset size of reward for next occurrence of behavior
- » Example: Fishbowl Method
  - » 250 good job cards/gifts
  - » 209 vouchers for \$1; 40 for \$20; 1 for \$100

**Reinforcement totaling \$80 = treatment as usual. Reinforcements of \$240 improves outcomes. Petry 2004**

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### IN THE CHAT BOX PLEASE ANSWER THIS QUESTION:

*Do you have a Contingency Management Program?*

Yes  
No




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### WHAT TREATMENTS HAVE BEEN TRIED FOR STIMULANT USE DISORDER?

- » Cocaine & amphetamines not consistently effective
- » Antidepressants: SSRIs and tricyclic antidepressants not effective
- » Bupropion: risk of seizures; 5 failed trials for amphetamine use disorder \*
- » Mirtazapine: risk of weight gain; single small study + for amphetamine use disorder in men who have sex with men
- » Treatment of co-occurring Opioid Use Disorder (OUD)
- » Opioid agonists: increased dose of buprenorphine or methadone shows decreased cocaine use generally
- » Naltrexone: + results in multiple small studies amphetamine use disorder and cocaine use disorder \*
- » Antiseizure medications: Topiramate (risks); + one or two small studies in amphetamine use disorder

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### WHAT TREATMENTS HAVE BEEN TRIED FOR STIMULANT USE DISORDER?

[https://downloads.asam.org/steffinity-production-blobx/docs/default-source/quality-science/stud\\_guideline\\_document\\_final.pdf?sfvrsn=21094b38\\_1](https://downloads.asam.org/steffinity-production-blobx/docs/default-source/quality-science/stud_guideline_document_final.pdf?sfvrsn=21094b38_1)



The ASAM/AAAP  
**CLINICAL PRACTICE GUIDELINE ON THE  
Management of  
Stimulant Use  
Disorder**

**There are NO FDA approved medications for stimulant use disorders. Best Practices and Standards of Care do NOT endorse medication for stimulant disorders, by prescribers who are not experienced in addiction medicine.**

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## WHAT'S ALL THE FUSS ABOUT?

- » New England Journal of Medicine article 2021
- » 400 adults with methamphetamine use disorder
- » Bupropion 450mg per day + placebo or bupropion 450mg per day + extended-release naltrexone 380mg IM q 3w (XR NTX )
- » 6-week study
- » Response defined as 3 of 4 toxicology tests negative for methamphetamines
- » 14% of patients on Bupropion + XR NTX responded vs 3% on Bupropion + placebo
- » Buprenorphine vs. placebo has a 21% difference for negative tox screen

This is a 6-week study and has NOT been replicated yet. Only 11% increased response over placebo. Compare this to the EXCELLENT outcomes from psychosocial treatments.

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## REFERENCES: STIMULANT USE

- Baicy, K., & London, E. D. (2007). Corticolimbic dysregulation and chronic methamphetamine abuse. *Addiction*, 102, 5–15. doi:10.1111/j.1360-0443.2006.01777.x
- Bolívar HA, Klemperer EM, Coleman SRM, DeSarno M, Skelly JM, Higgins ST. Contingency Management for Patients Receiving Medication for Opioid Use Disorder: A Systematic Review and Meta-analysis. *JAMA Psychiatry*. 2021 Oct 1;78(10):1092-1102. doi: 10.1001/jamapsychiatry.2021.1969. Erratum in: *JAMA Psychiatry*. 2022 Jan 26;; PMID: 34347030; PMCID: PMC8340014.
- California Department of Public Health. (2020). California Opioid Overdose Surveillance Dashboard. <https://skylab.cdph.ca.gov/ODdash/>
- CDC/NCHS, National Vital Statistics System, Mortality. CDC WONDER, Atlanta, GA: US Department of Health and Human Services, CDC; 2020. <https://wonder.cdc.gov/>
- Chester, N., Moltram, D. R., Reilly, T., & Powell, M. (2004). Elimination of ephedrine in urine following multiple dosing: the consequences for athletes, in relation to doping control. *British journal of clinical pharmacology*, 57(1), 62–67.
- DeFulio A, Rzeszutek MJ, Furgeson J, Ryan S, Reznia S. A smartphone-smartcard platform for contingency management in an inner-city substance use disorder outpatient program. *J Subst Abuse Treat*. 2021 Jan;120:108188. doi: 10.1016/j.jsat.2020.108188. Epub 2020 Nov 2. PMID: 33298295.
- Foulds, J., & Young, J. T. (2019). Pharmacotherapy for incarcerated people with a history of violence: Response to commentary by Schofield et al. *Australian & New Zealand Journal of Psychiatry*, 54(1), 106–107. doi:10.1177/0004867419885175
- Gouin, K., Murphy, K., & Shah, P. S. (2011). Effects of cocaine use during pregnancy on low birthweight and preterm birth: systematic review and metaanalyses. *American Journal of Obstetrics and Gynecology*, 204(4), 340.e1–340.e12. doi:10.1016/j.ajog.2010.11.013
- Hedegaard H, Miniño AM, Warner M. Drug overdose deaths in the United States, 1999–2017. NCHS Data Brief, no 329. Hyattsville, MD: National Center for Health Statistics. 2018.
- Hedegaard H, Miniño AM, Warner M. Drug overdose deaths in the United States, 1999–2018. NCHS Data Brief, no 356. Hyattsville, MD: National Center for Health Statistics. 2020.

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## REFERENCES: STIMULANT USE

- Disorder stimulant use management of - downloads.asam.org. (n.d.). [https://downloads.asam.org/sitefinity-production-blobs/docs/default-source/quality-science/stud\\_guideline\\_document\\_final.pdf?sfvrsn=71094b38\\_1](https://downloads.asam.org/sitefinity-production-blobs/docs/default-source/quality-science/stud_guideline_document_final.pdf?sfvrsn=71094b38_1)
- Kalaitzopoulos, D.-R., Chatzistergiou, K., Amylidi, A.-L., Kokkinidis, D. G., & Goulis, D. G. (2018). Effect of Methamphetamine Hydrochloride on Pregnancy Outcome. *Journal of Addiction Medicine*, 12(3), 220–226. doi:10.1097/adm.0000000000000391
- Lee, N. K., Jenner, L., Harney, A., & Cameron, J. (2018). Pharmacotherapy for amphetamine dependence: A systematic review. *Drug and Alcohol Dependence*. doi:10.1016/j.drugalcdep.2018.06.038
- Mayo Clinic Laboratories. (2020). Amphetamine-Type Stimulants (ATS). <https://www.mayocliniclabs.com/test-info/drug-book/amphetamine.html>
- NCHS, National Vital Statistics System. Estimates for 2019 and 2020 are based on provisional data. Estimates for 2015–2018 are based on final data (available from: [https://www.cdc.gov/nchs/nvss/mortality\\_public\\_use\\_data.htm](https://www.cdc.gov/nchs/nvss/mortality_public_use_data.htm))
- NIDA. 2020, April 3. California: Opioid-Involved Deaths and Related Harms. Retrieved from <https://www.drugabuse.gov/drug-topics/opioids/opioid-summaries-by-state/california-opioid-involved-deaths-related-harms> on 2020, October 7
- NIHCM Foundation. (2020). Beyond Opioids: Rapid Increase in Drug Deaths Involving Stimulants. <https://www.nihcm.org/categories/beyond-opioids-rapid-increase-in-drug-deaths-involving-stimulants>
- Oliva, EM, Bowe, T., Harris, A. H., & Trafton, J. A. (2013). Datapoints: False starts in psychotherapy for substance use disorders and PTSD in the VHA. *Psychiatric Services*, 64(8), 722.
- Paulus, M (2020) Neurobiology, clinical presentation, and treatment of methamphetamine use disorder a review. *JAMA Psychiatry* 77(9): 959-66.

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## REFERENCES: STIMULANT USE

- Peirce, JM, et al. (2006). Effects of lower-cost incentives on stimulant abstinence in methadone maintenance treatment: A National Drug Abuse Treatment Clinical Trials Network study. *Archives of General Psychiatry*, 63(2), 201–208. <https://doi.org/10.1001/archpsyc.63.2.201>
- Petry N., T. J. (2004). Prize reinforcement contingency management for treating cocaine users: how low can we go, and with whom? *Addiction*, 349-360.
- Sever, P. S., Dring, L. G., & Williams, R. T. (1975). The metabolism of (?)-ephedrine in man. *European Journal of Clinical Pharmacology*, 9(2-3), 193–198. doi:10.1007/bf00614017
- Smid, M. C., Metz, T. D., & Gordon, A. J. (2019). Stimulant Use in Pregnancy: An Under-recognized Epidemic Among Pregnant Women. *Clinical obstetrics and gynecology*, 62(1), 168–184. <https://doi.org/10.1097/GRF.0000000000000418>
- Substance Abuse and Mental Health Services Administration (SAMHSA). Treatment of Stimulant Use Disorders. SAMHSA Publication No. PEP20-06-01-001 Rockville, MD: National Mental Health and Substance Use Policy Laboratory, Substance Abuse and Mental Health Services Administration, 2020. <https://store.samhsa.gov/product/Treatment-of-Stimulant-Use-Disorder/PEP20-06-01-001>
- Substance Abuse and Mental Health Services Administration. (2017). Medical Review Officer Guidance Manual for Federal Workplace Drug Testing Programs. [https://www.samhsa.gov/sites/default/files/workplace/mro-guidance-manual-oct2017\\_2.pdf](https://www.samhsa.gov/sites/default/files/workplace/mro-guidance-manual-oct2017_2.pdf)
- U.S. Drug Enforcement Administration, Diversion Control Division. (2019). NFLIS-Drug Special Report: Methamphetamine Reported in NFLIS, 2001–2017. Springfield, VA: U.S. Drug Enforcement Administration. <https://www.nflis.deadiversion.usdoj.gov/DesktopModules/ReportDownloads/Reports/12568NFLISDrugMethamphetamine.pdf>
- Volkow, N. D., & Morales, M. (2015). The Brain on Drugs: From Reward to Addiction. *Cell*, 162(4), 712–725. doi:10.1016/j.cell.2015.07.046
- Werner, D. D. and DePhillippis, D. (2020, August 12). Contingency Management for People Experiencing Homelessness - Homeless and Housing Resource Network SAMHSA Webinar. Washington DC, Washington DC.

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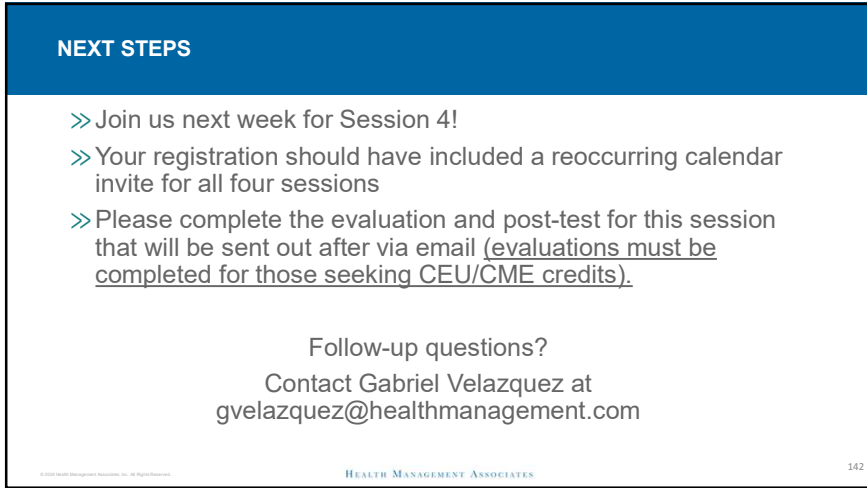
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AGENDA FOR WEBINAR SERIES	
Session	Topics
<b>#1</b> <b>WEDNESDAY,</b> <b>NOVEMBER 6</b> 12:00 pm to 3:00 pm	<input type="checkbox"/> Screening, and Assessment <input type="checkbox"/> Understanding HIV <input type="checkbox"/> HIV Testing, Treatment and Prevention <input type="checkbox"/> The Science of Addiction
<b>#2</b> <b>WEDNESDAY,</b> <b>NOVEMBER 13</b> 12:00 pm to 3:00 pm	<input type="checkbox"/> Ethical and Legal Issues <input type="checkbox"/> Funding and Policy Considerations <input type="checkbox"/> HIV Risk Reduction <input type="checkbox"/> SUD Harm Reduction <input type="checkbox"/> HIV and Stigma <input type="checkbox"/> Motivational Interviewing
<b>#3</b> <b>WEDNESDAY,</b> <b>NOVEMBER 20</b> 12:00 pm to 3:00 pm	<input type="checkbox"/> Working with Justice Involved Persons <input type="checkbox"/> Chem Sex <input type="checkbox"/> Substance Use Disorder Treatment with Medications <input type="checkbox"/> Mental Health Treatment and Counseling <input type="checkbox"/> Stimulant Use
<b>#4</b> <b>WEDNESDAY,</b> <b>NOVEMBER 27</b> 12:00 pm to 3:00 pm	<input type="checkbox"/> Cultural, Racial and Sexual Identities <input type="checkbox"/> Pregnancy and HIV, SUD/OD <input type="checkbox"/> Accessing, Obtaining, and Integrating Services for Individuals with HIV and SUD in Minnesota

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