STIMULANT USE DISORDER PRIMER FOR PRIMARY CARE CLINICIANS

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Disclosures

- Addiction Medicine section OHSU
- Harm Reduction Bridges to Care Clinic (HRBR) Clinician
- Provider Clinic Support System (PCSS) trainer for Medications for Opioid Use Disorder (MOUD) treatment
Objectives

◦ At the end of this session learners will be able to:
  ◦ Define methamphetamine use disorder (and other substance use disorders) using DSM V criteria and understand the implications for physical and mental health acute and chronic.
  ◦ Describe available treatment options and recommendations for methamphetamine use disorders including their efficacy and applicability for individual patients.
  ◦ Identify harm reduction techniques and practice changes to make today to improve the lives of patients with methamphetamine use disorder.

◦ Today's presentation will focus primarily on Methamphetamine Use Disorder
DEFINITIONS
Stimulant Drugs Defined


- Amphetamine/Methamphetamine
  - primarily work on dopamine and norepinephrine channels
  - Increased Energy
  - Alertness
  - Focus (ADHD)
  - Libido
  - Euphoria

- Cocaine
  - inhibits dopamine uptake

- “The most commonly used stimulant in the US is.....caffeine.” *

- What commonly prescribed antidepressant inhibits dopamine and norepinephrine uptake?

How methamphetamine works:

- Massive release of neurotransmitters that provide euphoria
- Repeated use causes reward system in the brain to react and adapt/change
  - particularly in the limbic system
- Creates drug-seeking behavior
- Negative consequences, despite severity, do not change behavior

What is Methamphetamine?

- Powder
- Pill
- Glass Rocks/Crystals

Tools Used:
- Spoons
- Straws
- Foil
- Glass (broken lightbulbs)
- Needles

Photo source: https://journeypure.com/ask-our-doctors/drug-addiction/meth/what-are-the-signs-that-someone-is-using-crystal-meth/
How are people using methamphetamine?

- Oral
- Nasal
- Smoking
- Injecting
- Rectal Administration

Some terms used to describe meth:
- Clear
- Crystal
- Crank
- Ice
- Speed
- And More…
PHYSICAL IMPACTS

of methamphetamine use
Possible physical side effects of Meth Use

- **Less Severe**
  - Anxiety
  - Sweating
  - Palpitations
  - Tachycardia
  - Insomnia
  - Headache
  - Lack of appetite

- **More Severe**
  - Itching
  - Tooth and Gum Decay/Bruxism
  - **Overamping**
  - Acute psychosis
  - Paranoia
  - Chest Pain
  - Hypertension/Stroke/CVA
  - Seizures
  - Arrhythmias/Death

Photo source: https://journeypure.com/ask-our-doctors/drug-addiction/meth/what-are-the-signs-that-someone-is-using-crystal-meth/
Possible Physical Impacts of Meth Use

- Overdose Death
- Hepatitis B and C
- HIV
- Increased STI risk beyond above (Syphilis!)
- Unplanned Pregnancy
- Meth Induced Heart Failure
- Respiratory
- Mental Health
  - Depression
  - Anxiety
  - Suicidality

- Are you screening for the above?
Long Term Recovery from Meth Use

- Recovery is possible
- Millions of people living in recovery daily
- May take time
The Problem - Meth

- Combined with other substances
- Increased frequency of use
- IV use increasing vs non-IV use
- Self-reported use in adults up by 22%
  - 2015: 1.66 million adults
  - 2022: 2 million adults
  - More people, more overdose
- Increased overdose death doubled
  - 2.1 to 5.6 per 100,000
- Fentanyl-contaminated
- Percent increase in Oregon: 100%
- Other Portland (Maine): 200%
- New Jersey: 733%

**Figure 1**
Surge in Methamphetamine Public Health Harms From 2015-2019 Despite Heightened Law Enforcement Response
Change in number of annual overdose deaths, possession arrests, meth-related substance use disorders, and meth use

- Died from meth overdose
- Arrested for meth possession
- Past-year meth SUD
- Used meth in past year

Percent change, 2015-2019


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Hospitalizations for injection drug use-related serious bacterial infections are rising.

Fig 1. Injection drug use-related SBI hospitalizations, overall and by SBI type, as a percentage of all hospitalizations, Hospital Discharge Data, Oregon, 2008–2018.

https://doi.org/10.1371/journal.pone.0242165.g001
The Problem-Oregon (2022-2023)

The Problem: Multnomah County

Based on data available for analysis on: January 07, 2024

Select State
Oregon

Select County
Multnomah

Figure 1. 12 Month-ending Provisional Counts of Drug Overdose Deaths for Multnomah County, Oregon

The provisional drug overdose death count for the 12 month-ending period ending in June, 2023 for Multnomah County, Oregon is: 540.

DIAGNOSING

Methamphetamine Use Disorder
What is Methamphetamine Use Disorder (MUD)?

A pattern of persistent methamphetamine use characterized by continued use despite harmful consequences

Chronic brain disease model -- Modern, evidence-based view:

- Genetic and environmental factors predispose to chronic drug use
  - ACEs

- Leads to structural and functional disruption of motivation, reward, inhibitory control centers

- Turns drug use into an automatic, compulsive behavior (addiction)
Diagnosis of Methamphetamine Use Disorder

- The Diagnostic and Statistical Manual of Mental Disorders, 5th Edition (DSM 5-TR) specifically looks at 11 criteria in 4 categories, can be organized into four C's

  - Craving
  - Compulsion
  - Consequence
  - Loss of Control
DSM 5 Criteria 1-4: Compulsion, Craving

1. Use in larger amounts or for longer periods of time than intended
2. Unsuccessful efforts to cut down or quit
3. Excessive time spent using the drug
4. Intense desire/urge for drug (craving)
DSM 5 Criteria 5-9: Consequences, Loss of Control

5. Failure to fulfill major obligations
6. Continued use despite social/interpersonal problems
7. Activities/hobbies reduced given use
8. Recurrent use in physically hazardous situations
9. Recurrent use despite physical or psychological problem caused by or worsened by use
DSM 5 Criteria 10, 11

10. Tolerance*
11. Withdrawal*

*can occur in absence of use disorder
Substance Use Disorder Severity

- **2-3**: Mild disorder
- **4-5**: Moderate disorder
- **6+**: Severe disorder
TREATMENTS
for Methamphetamine Use Disorder
The Bad News....

◦ ASAM released “New Clinical Practice Guideline to Address Rising Stimulant Use Disorders” on November 7, 2023.
◦ 224 pages

◦ No FDA approved medication for methamphetamine use disorder treatment or detox
  ◦ Detox is treatments for symptoms only
  ◦ Buprenorphine is for opioid use disorder, not methamphetamine use disorder treatment.
  ◦ Opioids and Methamphetamine are often used concurrently (speedball)
The not so Good News

◦ There are a few medications that have showed some efficacy for MUD treatment. (low certainty)
◦ They are all written with caveats and noted in patient’s chart that they are being used off-label
Mirtazapine (Remeron)

- Dose: 15-60
- Co-occurring depression treatment
- Co-occurring insomnia treatment
- Screen for:
  - Eating disorder history
  - Depression/SI/Manic Depression
  - CHF-use with caution
- Low Certainty, Conditional Recommendation
  - 2 RCTs with MSM only
Bupropion (Wellbutrin)

- Dose: 150-300XR
- Can help with tobacco use history/cessation
- Can help with depression
- Screen for:
  - Seizure history
  - Anxiety/Depression/SI/Manic Depression
  - Eating Disorder History
  - Alcohol Use
  - CHF-use with caution

- Low Certainty, Conditional Recommendation
- Less than 18 days per month use per month
Topiramate (Topamax)

- Dose: 100-200
- Co-occurring alcohol use disorder treatment
- Screen for eating disorder history
- Equivocal findings unless treating alcohol also

- Low Certainty, Conditional Recommendation
Naltrexone IM and Bupropion oral

- Dose 380mgIM monthly and 450mg daily
- Co-occurring Alcohol Use Disorder (mild severity)
- Cannot use if prescribing buprenorphine or patient using other opioids.
- Two recent studies using combination bupropion and naltrexone have shown more promise
- Moderate Certainty, Conditional Recommendation
- Moderate number of adverse events
- Oral Naltrexone is not studied here
Psychostimulants

- Close Monitoring: pill counts, UDS, PDMP, contracts, frequent in person visits
- Co-Occurring ADHD has a stronger recommendation
- Extended Release dosing is preferable and has strong recommendation

- Low Certainty, Conditional Recommendation
  - Cardiac Concerns
    - EKG
    - Blood pressure monitoring
Acute Methamphetamine Intoxication

- Anti-arrythmics: reserved for ventricular arrhythmias

- Beta Blockers: anxiety, tachycardia treatment

- Benzodiazepines: high certainty, conditional recommendation
  - reduce tachycardia
  - agitation, psychosis first line
  - reduce anxiety
  - treatment for active seizures
  - refer for higher level of care

*Low certainty, conditional for hyperadrenergic symptoms

https://www.ncbi.nlm.nih.gov/books/NBK545066/
Methamphetamine Withdrawal

- Acute phase (not all symptoms here) up to 14 days
  - Food Cravings/Meth Cravings
  - Depression/Anxiety/Psychosis/Paranoia
  - Fatigue
  - Headaches
  - Dry Mouth/Muscle aches
- +14 days to months
  - Anxiety
  - Depression
  - Cravings for meth
- Treat symptoms
The Mildly Good News

- Operant Conditioning: Positive ONLY reinforcement (negative doesn’t work well in drug use treatment)
- **Contingency Management** is the only treatment that has shown outcomes that are positive for people wanting to interrupt their use of methamphetamines
  - Rewiring of the reward system
  - Reinforce behavior that is considered positive each time it occurs
    - Example: patients come to a an appointment or group appointment for treatment
      - Each time they come, they receive a $5.00 gift card or another positive affirmation
      - If they have a urine without methamphetamine present, they receive a $10.00 gift card
      - This even works if someone from the group receives the gift card
- 40-50% effective
- Costs are inconsequential-Washington State Study
- According to ASAM 2023 practice guideline, should be offered with CBT as strong recommendation
- Refer to state Medicaid guidelines for cap on monetary affirmations
ABSTINENCE NOT REQUIRED!

PEER-CM Project Overview
Peers Expanding Engagement in Stimulant Harm Reduction with Contingency Management

For 6 months, you can receive gift cards and other rewards for meeting with a peer.

<table>
<thead>
<tr>
<th>Project Goal</th>
<th>To reduce stimulant overamping and opioid overdose events</th>
</tr>
</thead>
</table>

How will you get gift cards and swag?

<table>
<thead>
<tr>
<th>Meet with a peer one-on-one</th>
<th>$20 gift card*</th>
<th>Up to 15 gift cards (totaling $300)**</th>
</tr>
</thead>
</table>

*You can only get a gift card 1 time per week.
**You can get a swag item for additional meetings with a peer.

You are welcome to participate, if you:

- Have used methamphetamine, powder cocaine, or crack cocaine in the past 30 days
- Are willing to receive peer support services
- Are willing to complete an initial survey and 6-month follow up survey with a peer

If you choose to participate, you will:

- Be asked questions about yourself and your experiences at the start of this project and in 6-months. You will receive a $25 gift card if you complete the 6-month survey.
- Get rewards (gift cards and swag items) for meeting with a peer.
Digital CM

- [https://www.affecttherapeutics.com/](https://www.affecttherapeutics.com/)
- **Who is right for Affect:**
  - Anyone with a diagnosis of a stimulant use disorder (e.g., methamphetamine use disorder), alcohol use disorder, or cannabis use disorder
  - Access to a smartphone
PRACTICES TO START TODAY!

Harm Reduction/Screening
Methamphetamine (and any other illicit drug use) PEARL

- Always prescribe naloxone (Narcan) due to possible contaminants with opioids in supply
  - Most insurances: $30.00 co pay
  - Over the counter prices: $40-45,00
  - Oregon Health Plan insurance: no copay
Screening for Substance Use Disorders
Decide who and how you will screen, and who you are comfortable treating\(^*\) (are you ready, and if not do you know to whom to refer?)

- *Ideally all people, all ages, all the visits*
  - Ask Permission
  - Explain Confidentiality
  - Why would someone say no?
Screening for Substance Use Disorders

- Screening, Brief Intervention, and Referral to Treatment (SBIRT)
  - Identifies those at risk (substances/mental health) but also acts as tool for prevention
  - $25-66 depending on insurance type
  - https://www.samhsa.gov/sbirt/coding-reimbursement
- Alcohol Use Disorders Identification Test (AUDIT)
  - 10-item screening tool
    - assess alcohol consumption,
    - drinking behaviors,
    - and alcohol-related problems.
Screening for Substance Use Disorders-SBIERT

Brief health screen
We ask all our adult patients about substance use and need because these factors can affect your health. Please ask your doctor if you have any questions. Your answers on this form will remain confidential.

Alcohol: One drink =
- 12 oz. beer
- 5 oz. wine
- 1.5 oz. liquor (one shot)

How many times in the past year have you had 4 or more drinks in a day? _______

Drugs: Recreational drugs include methamphetamine (speed, crystal), cannabis (marijuana, pot), inhalants (paint thinner, aerosol, glue), tranquilizers (Valium), barbiturates, cocaine, ecstasy, hallucinogens (LSD, mushrooms), or narcotics (heroin).

How many times in the past year have you used a recreational drug or used a prescription medication for non-medical reasons?

Mood:

During the past two weeks, have you been bothered by little interest or pleasure in doing things?
- No
- Yes

During the past two weeks, have you been bothered by feeling down, depressed, or hopeless?
- No
- Yes

For the medical professional:

Interpreting the brief screen:

**Alcohol:** Patients who answer 5 or more should receive a full alcohol screen (such as the AUDIT).

**Drug:** Patients who answer 5 or more should receive a full drug screen (such as the OASIS).

**Mood:** Patients who answer “Yes” to either question should receive a full screen for depression (such as the PHQ-9).

Note: The alcohol question asks about four drinks in one day to identify risky drinking among all patients, informed by the validation studies below, as well as a gender inclusive approach to patient care.

Citations:

More resources: [www.sibert.org](http://www.sibert.org)
Screening for Substance Use Disorders-Audit

Alcohol screening questionnaire (AUDIT)

One question asks all patients about alcohol use at least once a year. Drinking alcohol can affect your health and some medications you may take. Please help to provide you with the best medical care by answering the questions below.

1. How often do you have a drink containing alcohol?
   - Never
   - Monthly or less
   - 2-4 times a week
   - 5 or more times a week

2. How many drinks containing alcohol do you have on a typical day when you are drinking?
   - 0-2
   - 3-4
   - 5 or more

3. How often do you have 5 or more drinks on one occasion?
   - Never
   - Less than monthly
   - Monthly
   - Weekly
   - Daily or almost daily

4. How often during the last year have you felt you were not able to stop drinking once you had started?
   - Never
   - Less than monthly
   - Monthly
   - Weekly
   - Daily or almost daily

5. How often during the last year have you failed to do what was normally expected of you because of drinking?
   - Never
   - Less than monthly
   - Monthly
   - Weekly
   - Daily or almost daily

6. How often during the last year have you needed a drink in the morning to get yourself going after a heavy drinking session?
   - Never
   - Less than monthly
   - Monthly
   - Weekly
   - Daily or almost daily

7. How often during the last year have you had a feeling of guilt or remorse after drinking?
   - Never
   - Less than monthly
   - Monthly
   - Weekly
   - Daily or almost daily

8. How often during the last year have you been unable to control what happened the night before because of your drinking?
   - Never
   - Less than monthly
   - Monthly
   - Weekly
   - Daily or almost daily

9. Have you ever been so inebriated because of your drinking?
   - No
   - Yes, but not in the last year
   - Yes, in the last year

10. Has a relative, friend, doctor, or other health care worker ever been concerned about your drinking or suggested you cut down?
    - No
    - Yes, but not in the last year
    - Yes, in the last year

Have you ever been in treatment for alcohol use?
   - Never
   - Currently
   - In the past

Scoring and interpreting the AUDIT:

For AUDIT scores ranging from 8 to 15: Points are added for each score that correlates with one of the following diagnoses:

- Alcohol dependence
- Alcohol abuse
- Alcohol use disorder
- Alcohol-use disorder

For AUDIT scores of 16 or more: Points are added for each score that correlates with one of the following diagnoses:

- Alcohol dependence
- Alcohol abuse
- Alcohol use disorder
- Alcohol-use disorder

The AUDIT may be used in conjunction with other diagnostic tools to assess for other conditions.

References: www.ohsu.org cpd
Screening for Substance Use Disorders

- Drug Abuse Screening Test/Drug Screening Questionnaire (DAST 10)
  - This tool assesses drug use, not including alcohol or tobacco use, in the past 12 months
  - 16 yrs old, plus

- CRAFFT-Car, Relax, Alone, Forget, Friends, Trouble risk screening
  - The CRAFFT is a series of 6 questions developed to screen adolescents for high-risk alcohol and other drug use disorders simultaneously.
  - 12-18 but can be used up to age 21
Screening for Substance Use Disorders-DAST

Drug Screening Questionnaire (DAST)

Using drugs can affect your health and some medications you may take. Please help us provide you with the best medical care by answering the questions below.

- Methamphetamine (speed, crystal)
- Cocaine
- Marijuana (marijuana, pot)
- Inhalants (paint thinner, aerosol, glue)
- Tranquilizers (valium)
- Other

How often have you used these drugs? Monthly or less Weekly Daily or almost daily

1. Have you used drugs other than those required for medical reasons? No Yes
2. Do you abuse more than one drug at a time? No Yes
3. Are you always able to stop using drugs when you want to? No Yes
4. Have you ever had blackouts or flashbacks as a result of drug use? No Yes
5. Do you ever feel bad or guilty about your drug use? No Yes
6. Does your spouse (or parent) ever complain about your involvement with drugs? No Yes
7. Have you neglected your family because of your use of drugs? No Yes
8. Have you engaged in illegal activities in order to obtain drugs? No Yes
9. Have you ever experienced withdrawal symptoms (feel sick) when you stopped taking drugs? No Yes
10. Have you had medical problems as a result of your drug use (e.g., memory loss, hepatitis, convulsions, bleeding)? No Yes

Have you ever injected drugs? Never Yes, in the past 90 days Yes, more than 90 days ago

Have you ever been in treatment for substance abuse? Never Currently In the past

Score Zone of use Indicated action
0 1 No-risk No risk of related health problems None
1-2, plus the following criteria: No daily use of any substance, no withdrawal symptoms other than craving, no injection drug use in the past 30 days, use currently in treatment.

1-2 Risk of health problems related to drug use. Brief intervention

Brief intervention: Inform patients about low-risk consumption levels and the risks of excessive alcohol use. Brief intervention: Patient-centered discussion that employs Motivational interviewing concepts to raise an patient’s awareness of their substance use and enhance their motivation to change their use. Brief interventions are typically performed in 15-30 minutes, and should occur in the same session as the initial screening. Requested sessions are more effective than a one-time intervention.

If a patient is ready to accept treatment, a referral is a proactive process that facilitates access to specialized care for individuals likely experiencing a substance use disorder. These patients are referred to alcohol and drug treatment experts for more definitive, in-depth assessment and, if warranted, treatment. However, treatment also includes prescribing medications for substance use disorder as part of the patient’s normal primary care.
Screening for Substance Use Disorders-CRAFFT 2.1

**Teen health screen (CRAFFT 2.1/N):**
We ask all our teen patients about alcohol, drugs, and mood because these factors can affect your health. Please ask your doctor if you have any questions. Your answers on this form will remain confidential.

**During the PAST 12 months, how many days did you:**

1. Drink more than a few sips of beer, wine, or any drink containing alcohol? Put “0” if none.
2. Use any marijuana (weed, oil, or hash by smoking, vaping, or in food) or “synthetic marijuana” (like “K2,” “Spice”)? Put “0” if none.
3. Use anything else to get high (like other illegal drugs, prescription or over-the-counter medications, and things that you sniff, huff, or vape)? Put “0” if none.
4. Use any tobacco or nicotine products (for example, cigarettes, e-cigarettes, hookahs, or smokeless tobacco)? Say “0” if none.

If you put “0” in ALL of the boxes above, ANSWER QUESTION 5, THEN STOP.
If you put “1” or higher in ANY of the boxes above, ANSWER QUESTIONS 5-10.

5. Have you ever ridden in a car driven by someone (including yourself) who was high or had been using alcohol or drugs?
6. Do you ever use alcohol or drugs to relax, feel better about yourself, or deal with stress?
7. Do you ever use alcohol or drugs while you are by yourself, or alone?
8. Do you ever forget things you did while using alcohol or drugs?
9. Do your family or friends ever tell you that you should cut down on your drinking or drug use?
10. Have you ever gotten into trouble while you were using alcohol or drugs?

**Interpreting the CRAFFT questions:**
Any “Yes” response should be explored with the patient to assess the extent of substance use-related difficulties and tailor the brief intervention.

**Brief intervention:**
Sharing information with patients about the risks of substance use.

**Brief interventions:**
Patient-centered discussions that emphasize motivational interviewing principles to cover the importance of their substance use and offer brief interventions to reduce harm from their use. Brief interventions are typically performed in 1-15 minutes and should occur in a safe setting; repeated visits are more effective than a one-time intervention.

If patient is ready to accept treatment, a referral is a practical and realizable that facilitates access to specialized care for individuals fairly experiencing substance use disorders. These patients are referred to alcohol and drug treatment experts for more definitive, in-depth assessment and, if necessary, treatment. Referral treatment also includes providing medications for substance use disorder as part of the patient’s normal primary care.

See resources: [www.obstetrical.org](http://www.obstetrical.org)

**Citations:**
Larry H. Williams, II, AAP COMMITTEE ON SUBSTANCE USE AND PREVENTION, Substance Use Screening, Brief Intervention, and Referral to Treatment. Pediatrics. 2014;134(2)
Positive Screen-Strong Recommendations from ASAM

- History and Physical Exam
  - Substance history
  - Family history
- Rhabdomyolysis signs in PE?
  - CK testing
- Social Determinants of Health Screen
  - housing
  - employment
  - food
  - transportation
- Mental Health Screen
  - ADHD/Psychosis/SI/HI
Substance History Questions

- What?
- Why?
- How?
- With whom?
- IPV/Trauma/Risky Sexual Activity?
Positive Screen-Conditional Recommendations

- General labs
  - CBC
  - CMP
  - HIV
  - Gonorrhea/chlamydia in all the places they have sex
  - RPR
  - Hepatitis Panel B and C
  - Pregnancy Testing PRN
  - TB testing PRN
  - UDS? Always send for confirmation if not what is expected

- Cardiac and Renal Exam
  - EKG
  - BNP
Harm Reduction

- Needle/Syringe Exchange
- Narcan/Naloxone
- Fentanyl Test strips
- Hotline/Safe consumption sites
- STI testing/Offer PReP/PEP
- Offer condoms/lubricant
- Referral to Dental Health
- What else?
Where to Refer/
Get on demand help in Oregon

OHSU Consult Line: call 503-494-4567 or toll free 800-245-OHSU (6478) 24 hours a day, 7 days a week


HRBR clinic (low barrier telehealth OP clinic): 503-494-2100, 10-7, Mon-Fri, closed holidays
Where to Refer/Get on demand help

https://oregonrecoverynetwork.org/treatment-and-detox-resources/
More Resources

Provider Clinical Support System (PCSS)
• Trainings, connect to a mentor to help support you in prescribing
  https://pcssnow.org/education-training/

Oregon Echo Network
  https://www.oregonechonetwork.org/addictionmed
References

- NIDA. 2021, April 13. How is methamphetamine different from other stimulants, such as cocaine?. Retrieved from https://nida.nih.gov/publications/research-reports/methamphetamine/how-methamphetamine-different-other-stimulants-such-cocaine on 2024, January 11
Thank you!

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