Emergency Department Care of Stimulant Use Disorder

Additional Clinical Guidance

- Stimulant use disorder (StUD) is treatable.
  - Contingency management, in which patients receive small rewards, such as gift cards, for achieving treatment goals, is the most effective intervention, but programs are not widely available.
  - Off-label medications can help reduce stimulant use.
  - Recovery often requires multiple treatment attempts.
- Stigma prevents help-seeking and worsens health outcomes.
  - Care teams must challenge biases to provide compassionate, evidence-based care.
  - Use non-stigmatizing, person-first language and trauma-informed care to promote engagement.
- People who use unregulated stimulants are at risk of accidental opioid use and overdose.
  - Provide naloxone and fentanyl test strips.
  - Use of naltrexone for StUD, when appropriate, has protective benefit.

Assessment

- Assess for withdrawal syndromes.
  - Acute stimulant withdrawal:
    - Begins within 24 hours of last use.
    - Symptoms include depression, anhedonia, hypersomnia, irritability, poor concentration, discomfort or pain, hyperphagia, cravings to use stimulants, and psychomotor agitation or retardation.
    - Treatment is supportive care, including being allowed to rest.
    - Hypersomnia is common during stimulant withdrawal and should not be confused with sedation resulting from medications for opioid use disorder (MOUD), if administered. If the respiratory rate is adequate, the dose of MOUD is not too high.
    - See **Acute Stimulant Withdrawal** for more information.
  - Assess for other withdrawal syndromes (e.g., opioid, alcohol, benzodiazepines) and treat accordingly. Withdrawal syndromes should be managed swiftly to prevent worsening symptoms and self-directed discharge.
- Assess for opioid dependence and opioid use disorder (OUD) prior to initiating naltrexone.
- Assess for other substance use disorders and treat accordingly.

- Consider screening for mental health comorbidities and referring to psychiatry as appropriate.
- Consider screening for STIs, HIV, and viral hepatitis. People who use stimulants may engage in high-risk sexual behavior.

Labs

- Drug testing is not necessary to initiate treatment of StUD.
- If drug testing is performed for clinical reasons, obtain informed consent.

Pharmacotherapy

Two forms of StUD, cocaine use disorder (CUD) and methamphetamine use disorder (MUD), are treated differently. Use the following table to aid in shared decision-making.

Indication	Medication	Dose	Contraindication	Caution	Additional Indications and Benefits
MUD	Naltrexone (see details below)	380 mg IM q 21 days (preferred) OR 50 mg PO daily (see details below)	Opioid dependence, severe hepatic impairment	Opioid use disorder	Alcohol use disorder Protection from accidental opioid ingestion Long-acting injectable form available
MUD, CUD	Bupropion	450 mg PO daily	Seizure disorder/ risk of seizures, MAOIs	History of bipolar disorder or seizures	Mood
MUD	Mirtazapine	30 mg daily	Renal failure, severe hepatic impairment, MAOIs	Risk of QTC prolongation when combined with other agents	High-risk sexual behavior Low BMI (promotes weight gain)
MUD, CUD	Topiramate	50 mg BID starting dose x 2 weeks Follow up for dose escalation up to 150mg BID	Pregnancy, renal impairment, glaucoma	History of seizures, CKD, low BMI, advanced age, cognitive dysfunction, and brain injury	Alcohol use disorder

- Naltrexone:
  - **Do not administer naltrexone to an opioid-dependent patient.** Naltrexone is an opioid antagonist that can precipitate delayed, long-lasting, and severe withdrawal symptoms in an opioid-dependent patient.
    - If dependency status is uncertain, consider a test dose of naloxone 0.4 mg, as it is shorter acting. Reassure the patient that if withdrawal occurs, symptoms will be treated. See **Opioid Withdrawal in Acute Care Settings.**

        - If withdrawal was induced, offer MOUD (return to "co-occurring OUD" in algorithm).
    - Co-occurring opioid use disorder (OUD):
        - Patients who have primary StUD and secondary OUD may not identify as having OUD and be hesitant to accept MOUD. Discuss the benefits, including significant reduction of opioid overdose risk and death, and prevention of withdrawal.
        - Buprenorphine and methadone are the preferred treatments and cannot be combined with naltrexone.
        - Naltrexone is a second-line option for OUD. It may be suitable to treat co-occurring OUD and StUD in some patients, such as in cases of prolonged abstinence from opioids, and with careful education regarding high overdose risk at treatment cessation.
    - Offer long-acting injectable naltrexone (Vivitrol) for consistent plasma levels.
- Extended-release stimulants (e.g., amphetamine/dextroamphetamine) may be appropriate in the context of co-occurring ADHD. Refer to addiction medicine or psychiatry.
- Low-dose aspirin and/or statins may lower the risks of cardiovascular disease associated with StUD. Consider starting statins and low-dose aspirin for those aged 30-60 with 2 or more risk factors for CVD (HTN, high cholesterol, DM, smoker) and no increased bleeding risk.

Pathophysiology

- High-potency stimulants like cocaine and methamphetamine can be acutely and chronically vascular and neuro-toxic.
    - Chronically elevated dopamine levels trigger neuroinflammation and cell death, contributing to neurodegeneration and psychosis.
    - Vasoconstriction and inflammation induced by stimulants can contribute to vascular disease, including hypertension, dilated cardiomyopathy, heart failure, atherosclerosis, arrythmias, aortic dissection, cerebrovascular disease, pulmonary and renovascular hypertension, and intestinal ischemia.
- STI and blood borne pathogen risk:
    - Stimulant use may increase sex drive and impulsivity and reduce inhibitions, increasing the likelihood of engaging in risky sexual practices.
    - Methamphetamine use is associated with higher rates of HIV and viral hepatitis.

Special populations

Pregnancy considerations:

- Medications:
  - Topiramate is contraindicated in pregnancy.
  - Naltrexone can be used safely during pregnancy, although data is limited.
  - Bupropion and mirtazapine can be used in pregnancy, although there are associated risks. Weigh the risks and benefits prior to initiating treatment.
- Prenatal care is important. A non-judgmental, trauma-informed approach may encourage engagement with prenatal care.
- In Washington state, parental drug use alone does not require a Child Protective Services (CPS) referral.

Polysubstance use

- Ask about other substance use and educate on strategies to reduce harm and offer treatment options.

Administration

- Naltrexone:
  - If naltrexone is appropriate and it is unfeasible to initiate LAI naltrexone (Vivitrol), it is reasonable to prescribe the oral formulation while linking to an outpatient provider that can administer the injection.

Discharge planning

- Help the patient schedule a follow-up appointment with primary care and/or offer information on available walk-in clinics, when available, to reduce barriers to care.
  - StUD medication management may be done by primary care, psychiatry, or a substance use disorder treatment program that has a prescriber.
  - Primary care is also important for management of correlated health issues, including cardiac and sexual health risk factors.
- Offer a referral to a behavioral-based StUD treatment program.
  - Contingency management has demonstrated the highest efficacy for StUD treatment. Contingency management programs provide participants with small rewards for achieving treatment goals. See the Health Care Authority's **Contingency Management factsheet** for program locations.
  - Cognitive Behavioral Therapy, Community Reinforcement Approach, and the Matrix Model are also evidence-based therapies. Outpatient or residential treatment programs can be found in the Department of Health's **Behavioral Health Agency Greenbook**.

- Ensure patients have enough medication to last until they can follow up with a prescriber. At least 7-14 days prescription length is advised.
- Provide the **Stimulants and Health** handout.
- Provide naloxone, even without known opioid use. People who use unregulated stimulants are at risk for unknowingly consuming opioids.
  - In Washington, emergency departments are required to dispense naloxone to patients who are at risk of opioid overdose, in compliance with SB5195. Ensure patients are discharged with naloxone in hand.
- If possible, connect patients with additional support such as social work, care navigation, or peer support to improve patient experience and linkage to care.

Patient Education

- Discuss strategies for improving health and reducing the harms of substance use.
  - Do this with empathy. Changing behavior can be extremely difficult.
  - Use the **Stimulants and Health** handout and the **Guide to Using the Handout** for more effective conversations.
  - See *Discharge Instructions* for tips to prevent overamping and overdose.
- Recommend safer sex practices, including condoms and PrEP.
- Educate on strategies to reduce harms related to other substance use, if any.