

# OVERDOSE RESPONSE STRATEGY

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## Stimulants in the United States

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### Introduction

Drug use patterns are changing across the United States. As fatal overdoses tied to the opioid epidemic are decreasing, polysubstance and stimulant-only overdose fatalities are increasing. According to the Centers for Disease Control and Prevention (CDC), cocaine was present in 29,449 fatal overdoses in 2023: a 7 percent increase from 2022. Psychostimulants with abuse potential, including methamphetamine, were present in roughly 34,855 overdose deaths in 2023: an increase of 2 percent from the previous year.<sup>1</sup> Fatality data for subsequent years remains provisional in many jurisdictions. Additionally, only 1 percent of fatal overdoses in 2010 had any stimulant present, while that increased to 32 percent in 2022. From 2018-2024, 14.5 percent of all fatal overdoses were attributed solely to the presence of stimulants.<sup>2,3</sup>

### Stimulants and Stimulant Overdoses (Overamping)

When discussing illicit substances, “stimulant” most commonly refers to cocaine (powder and crack), methamphetamine, ecstasy or MDMA and diverted prescription stimulants. When snorted, smoked, injected or otherwise consumed, stimulants act upon the body’s central nervous system to create feelings of alertness, euphoria, confidence and energy.<sup>1</sup> Broadly, stimulants act upon the body’s central nervous system, but more specifically they activate components of the sympathetic nervous system, which is responsible for the “fight or flight” response. Stimulant use will result in a temporary increase in heart rate (tachycardia) and blood pressure (hypertension). Chronic stimulant use can result in cardiovascular disease, stroke and the exacerbation of other medical or psychological conditions.<sup>4</sup> Cocaine is a particularly cardiotoxic stimulant because of its impact on the electrical conduction system of the heart.<sup>5</sup>

Stimulant overdoses, also called overamping, look much different than opioid overdoses, and in some cases can mimic or induce a psychiatric crisis. Stimulant overdoses can cause heart rate or blood pressure to reach dangerous levels. Other symptoms can include hyperthermia, seizures, uncontrolled muscle movements and psychosis.<sup>5</sup> Psychiatric symptoms can include extreme agitation, hallucinations and delusions.<sup>6</sup> Treatment for a stimulant overdose depends on the severity. Some stimulant overdoses can be managed through verbal de-escalation techniques or by providing a calm, cool and isolated space for a person to be under clinical observation. More severe overdoses may need emergency medical intervention to prevent a person from harming

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themselves, unintentionally harming others, or to manage dangerous physical symptoms like hypertension, tachycardia or hyperthermia. Special care should be taken by emergency responders and medical staff to limit physical restraint of the patient as this can contribute to increased levels of morbidity and mortality among people experiencing a stimulant overdose.<sup>4</sup>

## Seizure Data

United States Customs and Border Protection (CBP) reported that in 2025, 77,100 kilograms of methamphetamine were seized as part of 2,917 individual interdiction incidents and 70,100 kilograms of cocaine were seized as part of 2,364 incidents.<sup>7</sup> Within the United States and according to the most recently available reporting, the Drug Enforcement Administration (DEA) seized 97.5 metric tons (97,500 kilograms) of cocaine in 2024 and 25,792 kilograms of crystalline methamphetamine in 2023.<sup>8,9</sup>

In 2024, the DEA reported an average purity of 84 percent for cocaine seized in the United States: a noted increase from 74 percent in 2013.<sup>9</sup> At time of seizure, cocaine was found to be more pure than previous years as common cutting agents are found in smaller quantities. An average purity of 96.6 percent was reported with methamphetamine seizures.<sup>7,8,9</sup>

**Figure 1** shows the reduction in the most commonly reported cutting agents by percentage in cocaine seizures from 2020 to 2024.<sup>9</sup> *Example: In 2020, 40 percent of cocaine samples seized in the U.S. contained PTHIT, whereas in 2024, only 5.3 percent of seized cocaine samples contained PTHIT\*.*

	2020	2021	2022	2023	2024
PTHIT	40	35.6	24.7	10.4	5.3
Phenacetin	19.7	13.1	5.7	3.4	2.5
Lidocaine	7.4	3.7	2.6	2.5	2
Caffeine	6.7	3.7	2.6	2.5	1.8

Figure 1: the most common cutting agents (by percentage) found by the DEA in cocaine samples seized in the U.S. from 2020 to 2024.<sup>9</sup>

\*PTHIT is phenyltetrahydroimidazothiazole, more commonly known as levamisole or tetramisole.

It is important to note that seizure quantity and purity/potency data are law enforcement indicators and do not necessarily measure population exposure or risk.

## Associated Harms

Fatal and nonfatal stimulant overdoses are not the only consequences associated with increased stimulant use, purity and potency. Stimulant use, especially long-term use, is associated with

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cardiac and psychiatric complications, nutritional deficits and dental disease.

The spread of bloodborne infectious diseases like hepatitis C and HIV among people at increased risk of overdose can occur through the sharing of drug use equipment and unprotected sexual activity.<sup>10</sup> This is of particular concern because prolonged or chronic stimulant use is associated with a weakened immune system and an increased risk for other infections.

Methamphetamine use is associated with an increase in crimes of acquisition and domestic violence, especially after using larger quantities of methamphetamine over a short period of time.<sup>11</sup> It is important to note that methamphetamine use may aggravate existing risk factors for the perpetration of domestic violence rather than be its sole cause.<sup>12</sup> Timely diagnosis and treatment of stimulant use disorder (StUD) is imperative as the United States transitions from a landscape marked by opioid overdose deaths to one increasingly dominated by polysubstance use.

## Stimulant Use Disorder

### Definition and Diagnosis

Stimulant use disorder (StUD) is the continued use of a substance like cocaine or methamphetamine despite risks and adverse effects to a person's physical or psychological wellbeing, their professional or personal life and difficulty stopping or reducing use. When making a clinical diagnosis of StUD, two of the following criteria must be met within the last 12 months:<sup>11,13</sup>

#### Symptoms:

1. Taking more than intended
2. Failing to cut down or stop
3. Using larger amounts over a longer period of time
4. Urges and cravings
5. Continued use despite negative impacts on school, work or relationships
6. Using stimulants in physically hazardous situations
7. Increased tolerance
8. Spending time on activities with the purpose of obtaining, using or recovering from using a stimulant
9. Spending less time on activities not involving stimulant use
10. Tolerance
11. Withdrawal symptoms

#### Scoring:

##### Mild stimulant use disorder:

- 2-3 symptoms

##### Moderate stimulant use disorder:

- 4-5 symptoms

##### Severe stimulant use disorder:

- 6+ symptoms

\*Clinical discretion and other patient circumstances may alter the classification.

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A diagnosis of stimulant use disorder is also guided by the medical and social history provided by the patient. Clinicians may also use information from collateral sources (e.g., friends, family) if the patient consents. In addition to consulting an addiction medicine specialist, providers may also perform a mental status exam of the patient and address any urgent or emergent physical medical conditions, especially for patients with a history of long-term stimulant use.<sup>10</sup> It may be necessary to address chronic conditions prior to the patient engaging in treatment for StUD.

## Co-Occurring Conditions

Treatment of StUD can be complicated by psychiatric comorbidities. Thirty-five percent of adults with a diagnosed substance use disorder also have a mental health diagnosis. People may self-medicate for psychiatric conditions, but ultimately have their psychiatric conditions exacerbated by substance use.<sup>14</sup> Approximately 33 percent of patients with a primary psychiatric diagnosis also meet the criteria for a StUD diagnosis. In keeping with the trend of increased polysubstance use, roughly 30 percent of people seeking treatment for opioid use disorder (OUD) also report stimulant use that would meet the diagnostic criteria for StUD.<sup>15</sup> It is recommended to treat any co-occurring physical or psychiatric condition at the same time as StUD. An integrated care approach with a connected clinical team can help with treatment retention and increased periods of abstinence.<sup>10,14</sup>

## Treatment for Stimulant Use Disorder

Overdose fatalities involving cocaine increased from a rate of 1.4 per 100,000 deaths in 2012 to 7.3 per 100,000 deaths in 2023: an increase of almost 21 percent each year.<sup>10</sup> Treatment options for other substance use disorders are becoming more robust, but treatment for stimulant use disorder lags behind. Cost and accessibility remain barriers to StUD treatment, and it is estimated that 85-90 percent of people with StUD are not receiving treatment.<sup>13</sup> This is further compounded by the fact that of public funding allotted to substance use treatment, only 17.8 percent goes to StUD treatment programs.<sup>16</sup>

Prior to initiating treatment for stimulant use disorder, providers have multiple clinical issues to consider for their patients and must determine how to address these challenges.<sup>11</sup>

1. Polydrug use
2. Overdose risk
3. Co-occurring mental health disorders
4. Co-occurring physical health conditions
5. Psychosis, emotional lability
6. Cognitive deficits, either temporary or permanent
7. Withdrawal
8. Necessary level of care (in-patient, out-patient)

This constellation of considerations may inform which treatment modality an addiction provider deploys for StUD treatment.

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## Treatment Modalities

### Contingency Management

Contingency management (CM) is an evidence-based behavioral intervention to help a patient reach a desired and incentivized outcome. When treating StUD, patients receive something of value like cash, a gift card or other small item after a negative urine test, attendance at a certain number of therapy sessions or adherence to medication regimens.<sup>16</sup> Contingency management was first used in the 1930s to treat alcohol use disorder (AUD) and has since been used in programs for weight loss and smoking cessation.<sup>17</sup> Contingency management is also used in concert with cognitive behavioral therapy (CBT) and/or a community reinforcement approach (CRA). These other treatment modalities will be discussed later.

Studies of CM programs have shown that when used for the treatment of StUD, CM is associated with reductions in the number of days of stimulant use, stimulant cravings, new onset stimulant use and HIV risk behaviors.<sup>11</sup> Participation in contingency management programs for StUD is also linked with increases in physical activity, participation in therapy and adherence to medication schedules.<sup>18</sup> Additionally, the American Society of Addiction Medicine/American Academy of Addiction Psychiatry (ASAM/AAAP) asserts that contingency management has shown the greatest effectiveness in the treatment of stimulant use disorder, even as a stand-alone treatment.<sup>11</sup> An example of an abbreviated contingency management treatment program may look like **Figure 2**. Each CM program will have its own incentive schedule.



Figure 2: example timeline for contingency management treatment program<sup>19</sup>

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Despite the demonstrated effectiveness of contingency management programs, fewer than 10 percent of substance use treatment programs employ CM tactics.<sup>11</sup> Some addiction medicine providers and treatment centers believe that using contingency management practices rewards behavior that should be what they consider the social norm (abstinence) or is otherwise incentivizing drug use. CM programs are expensive to operate and require more resources than other methods to treat StUD.<sup>10</sup>

Regulatory requirements can also affect the implementation of CM programs. The federal Anti-Kickback statute (42 U.S. Code § 1320a-7b) prohibits clinicians from generating revenue from patient referrals that involve services that are then billed to the federal government.<sup>10</sup> However, this exact legislation as it relates to contingency management has not been clarified. In 2016, the Office of the Inspector General (OIG) placed a \$75 limit on CM services per patient via Medicaid. Some states with Medicaid expansion and a Section 1115 waiver have begun to increase the money allotted to CM program participants in 2021.<sup>17</sup> A Section 1115 waiver allows states to examine and test new ways to deliver and pay for services covered by Medicaid.<sup>20</sup> While there is no explicit legal barrier, unspecified legislation coupled with varied implementation and provider hesitancy make the use of contingency management programs challenging.<sup>17</sup>

## **Community Reinforcement Approach**

The community reinforcement approach (CRA) encourages people diagnosed with stimulant use disorder to adopt a lifestyle without substances that is more rewarding than a lifestyle including substance use.<sup>16</sup> The CRA aims to identify behaviors that reinforce stimulant use and replace them with behaviors that support abstinence. This is reinforced through programs that offer vocational assistance, job skills training and other activities that encourage community participation.<sup>11</sup> While CM remains the gold standard for the treatment of StUD, there is some evidence that combining CM with the CRA can help with cocaine abstinence and treatment retention. A meta-analysis of 50 clinical trials supported this conclusion and found no negative outcomes associated with a combined CM and CRA model.<sup>10,16</sup> The CRA has primarily been used to treat cocaine use disorder and does not have widespread implementation outside of research settings and trial environments.<sup>10</sup>

The Substance Abuse and Mental Health Services Administration (SAMHSA) recommends that treatment programs using the community reinforcement approach last 24 weeks and include drug screenings and group and individual counseling. Incorporating family and friends of the patient, as well as recreational activities, are also key components of the CRA.<sup>11</sup> The CRA requires a wide variety of resources and extended commitments from patients making the completion of evidence-based studies difficult.<sup>10</sup>

## **Cognitive Behavioral Therapy**

Cognitive behavioral therapy (CBT) is a therapeutic intervention that is meant to help patients identify thoughts and behaviors that negatively impact their lives. CBT is a short-term strategy that focuses on helping patients implement realistic strategies to combat substance use disorders,

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anxiety, depression and other mental health diagnoses.<sup>11</sup> CBT is commonly used and may improve coping strategies and reduce use, but CM shows the largest and most consistent effect on StUD treatment.<sup>16</sup> Some treatment programs will employ a mix of contingency management, the CRA and CBT to address StUD, but with mixed results. An examination of 12 randomized controlled trials (RCT) found that contingency management far outpaced CBT with StUD specific to methamphetamines. Because contingency management has the greatest level of success for StUD, it is unknown if the efficacy of these programs is because of the combination of treatment modalities or solely the presence of CM.<sup>16</sup>

## **Matrix Model**

The Matrix Model can be used as part of treatment for stimulant use disorder. It combines individual counseling, CBT, family education, social support groups and patient workbooks. Mutual support between patients is encouraged and its implementation is compatible with many existing in-patient and out-patient treatment programs.<sup>10</sup> SAMHSA developed a patient handbook for matrix modeling that has sections on:

- Daily, weekly and monthly planning
- Exercise tracking
- Accountability agreements
- Treatment planning
- Identifying triggers
- Community and employment
- Overcoming guilt and shame

The complete patient handbook can be found here:

<https://library.samhsa.gov/sites/default/files/sma15-4154.pdf>

SAMHSA has also developed a complementary handbook for treatment providers that outlines:

- Recommended treatment schedules
- Goal creation
- Facilitating individual and group treatment sessions
- Acknowledging patient successes and setbacks

The complete treatment provider handbook can be found here:

<https://library.samhsa.gov/sites/default/files/sma13-4152.pdf>

## **Pharmacotherapy**

Unlike treatment for opioid use disorder (OUD), there are no medications approved for the treatment of StUD by the U.S Food and Drug Administration (FDA). Various medications have been used off label to treat StUD, but with limited success. Antidepressant medications like bupropion and mirtazapine can be prescribed. Bupropion can improve mood but has shown little impact on cocaine abstinence and only a small effect on methamphetamine abstinence for people who do not use every day.<sup>10,11,16</sup>

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Lower doses of antipsychotics have been prescribed to treat StUD but have shown no marked difference in abstinence for cocaine or methamphetamine use. Anticonvulsant medications like topiramate have shown mixed results in methamphetamine abstinence and reduction in use.<sup>16</sup> The potentially desirable effects shown with topiramate can be offset by cognitive impairment and weight loss. Weight loss can be of particular concern as stimulants can depress appetite.<sup>6</sup>

Psychostimulant medications used to treat attention deficit disorders or narcolepsy have been considered for treatment of StUD in a similar manner to methadone or naltrexone treatment for OUD. The risks of this treatment modality are generally considered to outweigh the benefits because of complementary addiction potential, limited clinical trials and provider/prescriber hesitancy.<sup>10,11</sup> Of the clinical trials that have been conducted, there was little indication of abstinence with cocaine use and no increased abstinence with methamphetamine use.<sup>16</sup>

While withdrawal from stimulants does not typically mimic the physical symptoms of opioid or alcohol withdrawal, people may experience intense periods of agitation, depression, insomnia and anxiety. Clinical providers can use benzodiazepines for short-term symptom relief and antidepressants or anti-anxiety medications may be warranted for longer term management of symptoms.<sup>10</sup>

## The American Society of Addiction Medicine (ASAM) and the American Academy of Addiction Psychiatry (AAAP) Treatment Evaluation

In 2024, ASAM/AAAP convened a panel of researchers, subject matter experts and clinicians to evaluate the different treatment modalities for stimulant use disorder and develop clinical guidance for their implementation. A Quality Improvement Council along with a Clinical Guidance Committee conducted literature reviews, meta-analyses and literature extractions to evaluate the success of possible StUD treatments. This information was translated into a series of recommendations based on:

- The balance of harms and benefits of the intervention
- The certainty of evidence about the harms and benefits
- The values and preferences of the population(s) affected by the guidelines
- The acceptability and feasibility of intervention implementation

Recommendations were classified by degree of certainty for effectiveness (clinical consensus, high, moderate and low) and level of recommendation to implement (strong, weak or conditional).<sup>10</sup> The following modalities highlight the **most common approaches** to StUD treatment and their respective rankings from the ASAM/AAAP guidelines.<sup>10</sup>

- Contingency management (high certainty, strong recommendation)
- Mental status exam (clinical consensus, strong recommendation)
- Community reinforcement approach (low certainty, conditional recommendation)
- Cognitive behavioral therapy (moderate certainty, strong recommendation)
- Matrix Model (moderate certainty, conditional recommendation)

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- Bupropion (low certainty, conditional recommendation)
- Mirtazapine (low certainty, conditional recommendation)
- Topiramate (low-moderate certainty, conditional recommendation)
- Prescription psychostimulants (low certainty, conditional recommendation)

## Limitations in Treatment and Research

Limited clinical trials have combined bupropion and naltrexone for the treatment of StUD where methamphetamine is the primary drug. Naltrexone is used to treat both opioid use disorder and alcohol use disorder by blocking the effects of euphoria and sedation associated with those substances. Prescription psychostimulants, like amphetamine salts, also have study limitations and sparse use due to potential harms.<sup>21,22</sup>

Development and implementation of more robust treatment options for stimulant use disorder remain limited due to gaps in research and the current absence of FDA-approved medications to treat StUD. Of the studies that have been conducted, the participants were primarily men, with women making up less than 30 percent of study populations. Additionally, people with existing mental health diagnoses were excluded from more than 80 percent of clinical trials for StUD medication treatment.<sup>23</sup> Because mental health diagnoses and substance use disorder often present as comorbidities, the exclusion of a significant patient population limits accurate conclusions of pharmacological research. Additional limitations in research include small sample sizes, inconsistent study design and outcome assessments, lack of follow-up and patient attrition rates. Furthermore, of the studies conducted, very few examine methamphetamine use and focus solely on people who use cocaine.<sup>16,23</sup>

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## Moving Forward

### Leading Treatment Programs Across the Country

The necessity for StUD treatment programs is highlighted by the increase in stimulant use, the purity and potency of stimulants like methamphetamine and cocaine and the rising rates of overdose fatalities from stimulants.<sup>1,2,3,7,9</sup> Several programs across the country stand out as leaders in both treating and studying StUD and can serve as models for other jurisdictions looking to implement similar initiatives.



TRUST Program and HEART Fund – Montana Department of Public Health and Human Services (<https://dphhs.mt.gov/heartinitiative/>)

- Healing and Ending Addiction through Recovery and Treatment (HEART) and Treatment of Users of Stimulants (TRUST)
- Expanded Medicaid 1115 waiver
- Contingency management
- Justice-involved re-entry initiatives
- Expanded access to in-patient treatment
- Housing support services



START Program – Boston Medical Center, Grayken Center (<https://www.addictiontraining.org/>)

- Stimulant Treatment and Recovery Team (START)
- Contingency management and medication for StUD
- Provider training and technical assistance



Be Well Institute on Substance Use and Related Disorders - UT Health San Antonio (<https://bewell.uthscsa.edu/research/medication-for-stimulant-use-disorder/>)

- Collaboration with the Institute for Integration of Medicine and Science
- Medication for StUD
- Statewide referral network
- Research and grant funding for providers

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## Citations

1. Centers for Disease Control and Prevention. (2025). Stimulants. <https://www.cdc.gov/overdose-prevention/about/stimulant-overdose.html>
2. Pew Charitable Trust. (2024). *Stimulant use is contributing to rising fatal drug overdoses*. <https://www.pew.org/en/research-and-analysis/fact-sheets/2024/08/stimulant-use-is-contributing-to-rising-fatal-drug-overdoses>
3. Centers for Disease Control and Prevention. (2025). *Drug overdose deaths involving stimulants – United States, January 2018 – June 2024*. MMWR Weekly Report August 28, 2025 / 74(32);491–499.
4. Centers for Disease Control and Prevention. (2022). *Answers to emerging questions about stimulants in the context of the overdose epidemic in the United States*. Division of Overdose Prevention. <https://www.cdc.gov/overdose-prevention/media/pdfs/2024/03/CDC-Stimulant-Guide.pdf>
5. Palumbo, V. et al. (2025). *Cocaine-induced cardiac alterations: histological and immunohistological post-mortem analysis*. Diagnostics (Basel). 2025 Apr 14;15(8):999. DOI: 10.3390/diagnostics15080999.
6. Boston Medical Center. (2024). *Stimulant Treatment and Recovery Team (START): Clinical guidelines – a collaborative care approach*.
7. United States Customs and Border Protection. (2025). *Drug Seizure Statistics*. <https://www.cbp.gov/newsroom/stats/drug-seizure-statistics>
8. Drug Enforcement Administration. (2022). *CY2022 Methamphetamine Profile*. <https://www.dea.gov/sites/default/files/2025-09/CY%202023%20Methamphetamine%20Annual%20Report%20PRB%202024-35.pdf>
9. Drug Enforcement Administration. (2024). *CY2024 Annual Cocaine Report*. <https://www.dea.gov/sites/default/files/2025-09/CY2024%20Annual%20Cocaine%20Report%20PRB-2025-42%20Final.pdf>
10. American Society of Addiction Medicine/American Academy of Addiction Medicine (ASAM/AAAP). (2024). *The ASAM/AAAP clinical practice guidelines on the management of stimulant use disorder*. Journal of Addiction Medicine 2024; 18(1): 1-56.
11. Substance Abuse and Mental Health Services Administration (SAMHSA). (2020). *Treatment for stimulant use disorders: Treatment improvement protocol*.
12. Dowling, C. & Morgan, A. (2018). *Is methamphetamine use associated with domestic violence?* Trends and Issues in Crime and Criminal Justice, 563, 1-15.
13. United States Department of Veteran's Affairs (VA). (2021). *Stimulant use disorder: a VA clinician's guide*.
14. National Institute on Drug Abuse (NIDA). (2024). *Co-occurring disorders and health conditions*. <https://nida.nih.gov/research-topics/co-occurring-disorders-health-conditions#treatment>
15. Liu, M. PharmD. (2021). *Pharmacotherapy treatment of stimulant use disorder*. Mental Health Clin. 2021;11(6): 347-57. DOI: 10.9740/mhc.2021.11.347.
16. Ronsley et al. (2020). *Treatment of stimulant use disorder: a systematic review of reviews*. PLoS ONE 15(6): e0234809. DOI: 10.1371/journal.pone.0234809.

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17. Legislative Analysis and Public Policy Association (LAPPA). (2023). *Contingency management*. <https://legislativeanalysis.org/wp-content/uploads/2023/10/Contingency-Management-Fact-Sheet-FINAL.pdf>
18. Drug Policy Alliance. (2024). *Contingency management*. [https://drugpolicy.org/wp-content/uploads/2023/05/Contingency\\_Management.pdf](https://drugpolicy.org/wp-content/uploads/2023/05/Contingency_Management.pdf)
19. United States Department of Health and Human Services. (2023). *Contingency management for the treatment of substance use disorders: Enhancing access, quality, and program integrity for an evidence-based intervention*. <https://aspe.hhs.gov/sites/default/files/documents/a0cc6fcdb2968be95f60bb1c2c94eb70/contingency-management-sub-treatment.pdf>
20. Centers for Medicare and Medicaid Services. (2025). *State waivers list*. <https://www.medicaid.gov/medicaid/section-1115-demo/demonstration-and-waiver-list>
21. Substance Abuse and Mental Health Administration (SAMHSA). (2025). *Naltrexone*. <https://www.samhsa.gov/substance-use/treatment/options/naltrexone>
22. Boston Medical Center. (January 23, 2026). *Essentials of treatment stimulant use disorder* [presentation].
23. Liu, M. (2021). *Pharmacotherapy treatment of stimulant use disorder*. *Ment Health Clin* [Internet]. 2021;11(6):347-57. DOI: 10.9740/mhc.2021.11.347