

THE BASICS ON SUBSTANCE USE AND SERIOUS MENTAL ILLNESS

STIMULANTS

PART 1: BASIC FACTS

Description: Stimulants, also called psychostimulants, include cocaine, methamphetamines, prescription stimulants (i.e., lisdexamfetamine, methylphenidate, amphetamine), and 3,4-methylenedioxymethamphetamine (MDMA, ecstasy). Prescription stimulants treat attention-deficit/hyperactivity disorder (ADHD) or narcolepsy.

Methods of Use: Prescription stimulants are typically taken orally, but they are also available as a patch and liquid formulation. Cocaine is commonly snorted, inhaled by smoking (in freebase form “crack”), or injected. Methamphetamine is commonly used orally, via injection, or by inhalation referred to as “ice” or “crank.” How an individual administers the substance can influence how much of an immediate effect or “high” they may feel. For instance, injecting or inhaling stimulants provides the fastest delivery of the drug to the brain, resulting in the reward or “high” feeling.

Prevalence: Similar to other substance use, stimulant misuse is more common among individuals with SMI compared to the general population.¹

Reasons for use: Stimulants produce a “high” and this effect can be more powerful if the substance is injected or inhaled. Individuals misuse stimulants for various reasons and commonly for performance-enhancing effects such as improving their ability to concentrate or complete activities, to feel “high” and temporarily reduce their feeling low or depressed.²

Problems related to use in people with SMI:

- ⦿ **Effects on the brain:**^{3,4} Stimulant use results in a “high” and can provide temporary relief for some, but over time repeated stimulant misuse can lead to adaptation and the reward pathway becomes less sensitive to natural reinforcers. Additionally, the brain becomes increasingly sensitive to stress, leading to increased displeasure and negative moods. With longer use, tolerance may develop with higher doses and more frequent use. If prescribed stimulants are used appropriately and monitored by a medical provider, these can help certain individuals who have been accurately diagnosed with ADHD or narcolepsy.
- ⦿ **Effects on symptoms:** For individuals with SMI, stimulant misuse (including misuse of prescribed stimulants) is associated with worse clinical outcomes in the long run (both medically and psychiatrically). Stimulants can also cause increased agitation, anxiety, paranoia, aggression, hostility, mood swings, and stimulant-induced psychosis.
- ⦿ **Effects on medications:**⁵ Alcohol can increase plasma dextroamphetamine concentrations. Additionally, CYP2D6 inhibitors can increase amphetamine levels. It is important for clinicians to review individuals’ medications in each visit.
- ⦿ **Effects on substance use disorders:** Individuals with SMI are at greater risk for developing substance use disorders (SUDs) generally (including stimulant use disorders) and comprehensive substance use screening is necessary. Stimulant misuse can also contribute to use of other substances, including alcohol. Prolonged exposure to stimulant misuse changes the brain chemistry and can make a patient vulnerable to developing other substance use disorders.

PART 2: SCREENING AND INTERVENTION

For individuals with SMI, it is important to not only identify whether the person is using substances, but also to describe the pattern of substance use, whether the substance use is causing harm, and the degree to which the individual is in control of the substance use. Some individuals will have patterns of harmful use that are “in control” and do not meet criteria for the diagnosis of SUD. For individuals with a chronic psychiatric disability, any persistent substance use is likely to be harmful, even if there is no obvious intoxication or lack of control, as the substance use can interfere with the person’s fragile brain equilibrium. Other individuals may have patterns of “out of control” substance use that are consistent with moderate to severe SUD. These require different levels of intervention. **Once substance use is identified, the assessment should inquire –for each type of substance - about the pattern of use: experiences and perceptions of harm because of that use pattern and the degree to which the individual experiences control – or lack of control – over that use.**

| Brief Guide to Screening:

- A. Screening requires practice.** Developing a “welcoming” style to facilitate screening takes practice. It is a common concern that the person you are interviewing will not want to talk about their substance use, and that they might not tell the truth. In fact, most people who use substances talk about their substance use all the time; they just don’t think it’s a good idea to talk to you! How can you convey to the person you are screening that you would be a good person with whom to talk to about their substance use? The key is in the concept of welcoming. If you are genuinely open when the person shares their substance use with you (rather than disapproving or disappointed) they will be much less likely to conceal information. But it takes practice to do that, and to balance the fact that you don’t recommend that they use substances with welcoming the opportunity to discuss their substance use openly. Remember that you can’t help them make better choices if they don’t discuss their choices at all.
- B. Screening works best when it is integrated into the person’s story.** Pulling out a “screening tool” and asking questions one after the other often feels less personal and reinforces the person’s natural inclination to say “no” to all the questions, just to get the painful process over with. Using a tool is helpful for the interviewer to remember things to ask about, (and not to forget what to ask), but the art of doing this is to work the questions into the flow of the story so that the person can progressively feel more comfortable sharing (and that areas where the person is uncomfortable sharing can be more clearly identified). Some clients may feel more comfortable answering questions on a screening form, rather than face to face, but many will not.
- C. Screening for stimulants use should be routine in all services delivering care to those with SMI.** Stimulant use screening is always embedded in a broader approach to substance use screening. Remember, SUDs are more prevalent among people with SMI compared to the general population, and use of multiple substances is common.^{1,6} See [this resource](#) for various screening tools and processes that include screening for stimulants.

| Brief Guide to Intervention:

How you talk to people who indicate they are using stimulants is always based in a framework of welcoming, empathic, hopeful partnership and needs to be matched to the individual’s stage of change for stimulant use as well as their personal goals for a happy, meaningful life (recovery goals).⁷

For instance, if an individual is in the precontemplation stage about stimulant use, the focus is on helping them move into the contemplation stage, that is to develop enough trust to engage in discussions about their substance use, so they can work in partnership with the team over time (often months) to make better decisions. The most important thing you can do is to maintain a welcoming strength-based relationship, which increases their ability to eventually discuss their substance use more freely. If the person is in the contemplation stage (or beyond this stage), then it is helpful to provide a recommendation of abstinence (without struggling with the person), and while indicating that the most important goal is to help the person make the best decisions for themselves),

maintain the option of making progress in tiny steps (as opposed to abstinence being the only goal) and providing awareness of treatment options including how the mental health team can provide support for making even small steps toward change. The more information the person has about how the team can help support efforts to change, the more prepared they can be when they are ready to make a change to their substance use. More information is available [here](#) about Stages of Change and matching interventions with each stage.

Example vignette: Meeting of the mental health care team with a person with SMI using methamphetamine. The individual is in the contemplation stage of change, and the team is using a motivational interviewing approach.

Case: This is a male outpatient who has been diagnosed with schizophrenia and stimulant use disorder. It's been very difficult for him to trust his mental health care team to talk about his substance use, but he has made progress over many months. The mental health care team has worked with him long enough to be able to tell when he has been using, which helps the mental health care team have a conversation with him about it. Bill comes into the clinic, looking like he hasn't slept...He seems more paranoid than usual. This is often an indication that he has been using methamphetamine. The team engages him in a conversation about it, as follows:

Mental health professional (MHP) or any team member: *Hi, great to see you. How are you? You look kind of worn out...*

Individual: *I'm fine...I don't want to talk.*

MHP: *I totally understand. You know, you look like you do when you've been using meth. And I want to remind you, as we've talked about many times: we are not at all wanting to bug you about using. We just want you to trust us enough to help you figure out your drug use, so that you can be as successful in your life as you can be. So, if you have been using, it's cool to talk to us about it, and then we can figure out how it's working for you.*

Individual: *Well, yeah, I guess I got high last night.*

MHP: *Thanks, I'm so proud of you for telling me that. How did it go?*

Individual: *Well, like always, it was just fantastic at the beginning. There's nothing else that gets me feeling so energetic and good.*

MHP: *So, then what happened?*

Individual: *I don't know. I felt good, and then I started getting all paranoid, and couldn't sleep. I went out of my apartment, and there were cops everywhere. I was totally scared. I kept walking all night and then I came here. I'm exhausted.*

MHP: *Wow, that's rough. We need to help you get some rest. What do you think about what happened?*

Individual: *I know you want me to say that I won't do it again, but I can't say that.*

MHP: *Look, you and I know that meth is bad for you in all kinds of ways, but I want to reinforce that it's your decision about where meth fits into your life.*

Individual: *Yeah, I love that feeling at the beginning and I know this stuff is frying my brain, but my brain is fried anyway, so who cares. I wish I could believe that it would really make a difference if I stopped.*

MHP: *I totally hear you. One of the hardest things for folks with serious mental illnesses is to really believe that they can get into recovery, and have a happy and meaningful life, when you have a really painful illness. We want you to know that we believe in your goals, and your ability to achieve them. We've seen people who are just like you get into recovery, and we want to hold that hope for you even if you lose it yourself.*

If you want, we can discuss treatment options – that is, ways we can help you make progress on your meth use, even if you only want to cut down a little and not stop entirely. I don't want to pressure you, though, so you need to tell us if you're interested in learning more about all the ways we can help you make progress.

Individual: *Thanks for that. It means a lot. I'm not ready to stop using but I'm thinking about it. I know meth is really not good for me, and I'm glad you guys are on my side. I'll let you know when I feel ready to learn more about how you can help. I'm glad you don't want to just refer me to some addiction program though... those places are really scary for me.*

PART 3: TREATMENT OPTIONS

The options below are presented in professional language. In presenting these options to an individual, you would tailor the language.

There are currently no FDA-approved medications for the treatment of stimulant use disorder. Acute intoxication can be managed with benzodiazepines as needed. For people who have new-onset or exacerbation of psychoses, these symptoms may need additional medications such as antipsychotics and clinicians should determine the most appropriate medication regimen for each individual.

Behavioral Therapies are a form of psychosocial interventions that assists an individual with building self-management skills for managing triggers, cravings, and risky situations, as well as skills for creating a support system (professionals, family/friends, peers) and using that support system by regularly asking for help.

Recovery Support Programs are peer led programs that provide extra support to individuals who are ready for change and looking to practice abstinence from the use of substances. These programs are typically delivered through community and faith-based groups by way of mutual support meetings.

SUD Treatment Groups or Programs are professional supervised programs within outpatient, inpatient, and residential settings. These could be referred to individuals that may benefit from professional stage-matched group interventions.

Comprehensive Integrated Care is often indicated since individuals with SMI and comorbid substance use often have poorer medical outcomes and require care coordination for management of mental health, substance use and medical illnesses. Treatment plans should be individualized to each individual's unique needs and may include medication, counseling or therapies, mutual support groups, and additional psychosocial interventions.

References

1. Substance Abuse and Mental Health Services Administration. Key Substance Use and Mental Health Indicators in the United States: Results from the 2019 National Survey on Drug Use and Health [Internet]. Rockville, MD: Center for Behavioral Health Statistics and Quality, Substance Abuse and Mental Health Services Administration.; 2019 p. 114. (NSDUH Series H-55). Report No.: HHS Publication No. PEP20-07-01-001. Available from: <https://www.samhsa.gov/data>
2. Miller S, Fiellin D, Rosenthal R, Saltz R. The ASAM Principles of Addiction Medicine. Sixth. Wolters Kluwer; 2018.
3. Wolf ME. The Bermuda Triangle of cocaine-induced neuroadaptations. Trends Neurosci 2010;33:391-98.
4. Buttner A. Neuropathological alterations in cocaine abuse. Curr Med Chem 2012;19:5597-600.
5. Schoretsanitis G, de Leon J, Eap CB, et al. Clinically significant drug-drug interactions with agents for Attention-Deficit/Hyperactivity Disorder. CNS Drugs 2019;33:1201-1222.
6. Hartz SM, Pato CN, Medeiros H, Cavazos-Rehg P, Sobell JL, Knowles JA, et al. Comorbidity of Severe Psychotic Disorders With Measures of Substance Use. JAMA Psychiatry. 2014 Mar 1;71(3):248.
7. Zimmerman GL, Olsen CG, Bosworth MF. A "Stages of Change" Approach to Helping Patients Change Behavior. Am Fam Physician. 2000 Mar 1;61(5):1409-16.

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