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Policy Proposals to Reduce Stimulant-related Harm: How to Address the Fourth Wave of the Overdose Crisis

2021

Few policies specifically address stimulant-related harms, even though stimulants are among the most widely consumed psychoactive drugs in the United States and are playing a growing role in the overdose crisis. This paper presents common motivations for stimulant use, the most noteworthy harms associated with stimulant use, and the ways in which various public policies can be tailored to address both. Policy proposals to reduce stimulant-related harms should:

- **address social determinants of health that can exacerbate stimulant-related harms**
- **increase access to health services (including harm reduction and treatment), and**
- **reduce contact between marginalized people who use stimulants and law enforcement.**

BACKGROUND

Stimulants are among the most commonly used illicit drugs in the United States. In 2019, 5.5 million people reported using cocaine and two million said they had used methamphetamine.[1] While national rates of stimulant use have remained relatively stable in recent years, these drugs have been increasingly involved in the overdose deaths across the country. In fact, recent estimates suggest that from 2012 to 2019, the rate of cocaine-involved overdose deaths tripled and the rate of methamphetamine-involved overdose deaths increased six-fold.[2]

Policies to reduce the harms associated with stimulant use are predominantly focused upon supply reduction, including crop eradication, precursor regulation and criminalization, trafficking enforcement, and border control. Policies to reduce demand include to fund drug prevention initiatives, provide harm reduction, and increase drug treatment access. However, in the United States, demand reduction polices often receive relatively less funding than supply-side efforts.[3]

Despite these supply and demand reduction efforts domestically and internationally, recent evidence suggests that coca crop cultivation and cocaine production is at historic highs, amphetamines are expanding to new markets, and the use of all stimulant drugs remains high.[4]

It is clear that there are significant limitations to current policies, and that they must consider other factors if the harms associated with stimulant use are to be reduced. For one, motivations and drivers of ongoing stimulant use must be acknowledged and addressed in demand reduction policies. Motivations for using stimulants vary and are frequently driven by social, cultural, and environmental factors that may require different policy solutions. In addition, the harms faced by people who use stimulants are diverse and range in severity from acute health effects to criminalization. A recognition of these distinct harms must also guide policies in order to be effective.

Motivations for use

Stimulants, like other drugs, are used for a variety of reasons. Understanding motivations and benefits of use is an important part of developing policies to attend to the circumstances and cultures of the people who use these substances.[5] People who use stimulants report a wide range of motivations for use, including euphoria and pleasure, coping with negative emotions, performance enhancement, alertness, social acceptance, weight loss, increased productivity, stigma management, increased sexual desire and longevity, appetite suppression, and others.[6] Larger cultural and social values also drive stimulant use, such as high pressures for achievement and productivity.[7]

A number of these motivations for use are functional or are responses to circumstances that drive or sustain use. For instance, methamphetamine can be used to stay awake and vigilant while coping “with a multiplicity

of vulnerabilities directly tied to homelessness or housing insecurity," including fear of arrest, detection, theft, or assault.[8] In these circumstances, alertness can serve a protective and adaptive function. Another example of functional use occurs among students and workers. Performance enhancement, combined with alertness, is also a powerful motivator for stimulant use among students who face academic pressures and for workers in a number of professions with irregular hours, long shifts, and those that require sustained attention.[9] The link between stimulant use and increased sexual desire and longevity, pleasure, and decreased inhibition also drives use for many populations including men who have sex with men, trans women, and sex workers. In addition, social norms and pressures in these contexts may encourage risky or harmful levels of use.

Harms associated with use

Stimulant use has been associated with a number of harms, many of which can be mitigated by harm reduction strategies.[10] Some of the known health risks of stimulant use include mental health problems such as psychosis, anxiety and paranoia, a range of physical ailments, most notably cardiovascular problems, those associated with routes of administration, sexually transmitted infections, and "overamping" (i.e. having an adverse physical or mental health response due to high dosage).

While a number of these harms are directly linked to use (e.g. sleep deprivation, cardiovascular problems, overamping), others are harms indirectly associated with use such as contracting sexually transmitted infections or blood-borne infections due to shared smoking or injection equipment. Both types of harms require targeted interventions and approaches to address them adequately. Harms associated with use can also be created or exacerbated by a number of structural and environmental risk factors. Most notably, criminalization, housing instability, food insecurity, limited access to mental health and physical healthcare, poverty, marginalization, and stigma can put some people who use drugs at greater risk for experiencing harms associated with their use.

People who smoke crack cocaine have a high prevalence of oral lesions, including sores, cuts, and burns, which have been shown to increase the risk of HCV and HIV transmission, through the sharing of consumption equipment such as crack pipes[11]. In a study of people who use crack and other substances in Vancouver, approximately 80% reported unsafe crack use practices, including crack pipe sharing, and acute health risks such as oral burns or lesions.[12] Smoking of crystal methamphetamine is likewise associated with the potential for transmission of hepatitis.[13] Though heated methamphetamine pipes do not cause direct injuries as frequently as crack pipes, they do result in dry, cracked lips, which may facilitate disease transmission.[14] And, studies have shown that sharing of equipment among people who smoke methamphetamine is common and widespread.[15]

Poverty, unemployment, homelessness or unstable housing, and lower socio-economic status are challenges often faced by people addicted to stimulants.[16] Research has shown that housing uncertainty often precedes initiation of drug use[17] and is also linked to increased intensity and frequency of drug use.[18] Homelessness has also been independently associated with injection initiation among street-involved youth,[19] and loss of housing stability has also been associated with higher intensity crystal methamphetamine use among youth.[20] One study concluded that while the use of stimulants is multifactorial, "homelessness . . . has a strong population-level influence on the use of stimulants."[21]

Stimulant use and stimulant use disorders are complex issues and there is no silver bullet to help people stay safe. Rather, a multifaceted, comprehensive approach rooted in research is needed. The recommendations outlined here are not intended to reflect the full spectrum of solutions, but rather, highlight just a few high level proposals that have the greatest potential for across-the-board success in addressing the harms of problematic stimulant use and increasing access to effective services and treatment (for those that want or need it). Our hope is that these act as a starting point for which to engage state and federal policymakers.

Decriminalize Drug Paraphernalia

All drug paraphernalia should be decriminalized. While 39 states in the U.S. provide access to sterile

syringes for people who inject drugs, nearly all states criminalize equipment for smoking or snorting drugs due to paraphernalia laws.[22] The decriminalization of drug paraphernalia would foster a host of health-related benefits for people who use stimulants and would serve as a bridge to engage highly marginalized people who use drugs in care and services.

Policies should be implemented and funding provided, in order for syringe access and other harm reduction programs to provide education on safer smoking and snorting practices and distribute safer smoking and snorting equipment. This could thereby promote programs that address the high potential for infectious disease transmission among people who smoke or snort stimulants while also engaging this highly marginalized population into care. There is evidence that these programs would be appealing to people who currently use stimulants – 89% of people who use crack surveyed in Vancouver expressed a willingness to utilize a crack pipe distribution program if available.[23]

A host of studies conducted in Canada found that existing crack pipe distribution programs were associated with reductions in the sharing and/or use of risky crack paraphernalia.[24] Though the social aspect of sharing[25] and other structural barriers can be challenging to address through these programs[26], safe smoking equipment distribution has a number of other important benefits, including helping injectors switch to smoking, which is a less risky mode of consumption.[27] One of the benefits of drug use via inhalation rather than injection includes ingestion of lower doses of the drug, which can reduce risk of overdose. Another benefit is the reduction of injection-related harms and risks such as infection and blood-borne disease transmission.[28] The provision of safe smoking equipment is an evidence-based and urgently needed strategy that could either prevent initiation of injection drug use, or be a strategy to transition away from injection.

Safe smoking equipment distribution provides a critical entry point to engage people who use stimulants in a broader continuum of care. One study of the crack use kit distribution program in Winnepeg, Canada found that of the over 13,800 encounters at the program in a one-year period, two-thirds (68%) resulted in providing not just safe equipment but also other services. These other services included co-current needle distribution, pregnancy testing and prenatal referrals, infectious disease testing, the reporting of interpersonal violence, and receipt of other health-care services (e.g., immunizations, wound care, medical referrals).[29] Other studies have found that safe smoking equipment distribution programs resulted in increased health risk awareness[30] and the facilitation of social connections and relationships among participants.[31]

Decriminalization of paraphernalia would also facilitate legal access to fentanyl testing strips. Fentanyl is a powerful synthetic opioid with a heightened risk of overdose that recently has been found in other substances, including stimulants. Overdose deaths involving fentanyl have increased over the past five years, largely due to more frequent adulteration in other substances and polysubstance use.[32] Though most often utilized by people who use opioids, fentanyl testing strips have an important harm reduction benefit for people who use stimulants. In fact, a fentanyl test strip pilot program in San Francisco from 2017 to 2018 found that 78% of the crystal methamphetamine samples tested positive for fentanyl as did 67% of the crack cocaine samples.[33] Research has also shown that people who detect fentanyl in their drug supply will change their behavior to reduce overdose and other risks.[34]

Authorize and Implement Inclusive Supervised Consumption Spaces

Supervised consumption spaces (SCSs) are legally sanctioned facilities that allow people to consume pre-obtained illicit drugs under the supervision of trained staff in a hygienic space.

Overwhelming evidence demonstrates that such sites minimize the risk of blood-borne disease transmission, reduce overdose fatalities, reduce public nuisance and neighborhood-related crime, and increase referral to drug treatment and other health services.[35] They first began to open in Europe in the 1980s; today approximately 120 sites operate throughout Europe, Canada and Australia.[36] Although no legally sanctioned SCSs operate in the United States, a recent evaluation of an unsanctioned SCS found that no deaths occurred within a five year period, suggesting that SCSs could reduce mortality from overdose in other areas of the country.[37]

Though most of the evidence in support of SCSs has been focused on the reduction of injection-related harms in the context of opioid use, there is a critical need to ensure that people who use stimulants, whether consuming via injection, inhalation, or otherwise, can access the benefits of a safe space to use and a connection to care and services. Most European jurisdictions with SCSs allow for both smoking/inhalation and injection within the same facility (but in separate spaces) or have separate SCSs dedicated to each.[38]

A study in Vancouver, which currently does not allow smoking/inhalation at their SCSs, found that of a total of 437 crack cocaine smokers, 69% reported a willingness to use a safer smoking site if one was made available.[39] Willingness to use a smoking site was associated with recent injection use, having equipment confiscated or broken by police, crack binge use, smoking crack in public places, borrowing crack pipes, and burns/inhaled brillo due to rushed smoking.[40] As a result, the authors conclude that there is strong potential for smoking/inhalation rooms to "reduce community health risks, including infectious disease transmission, and address issues of open drug use and concerns of public order."[41]

The few studies that evaluate the benefits of permitting smoking at SCSs show similarly positive effects as those that allow injection-only. The introduction of a smoking room that permitted the use of crack cocaine in a Swiss SCS, for instance, did not lead to increased aggression and violence as assumed; instead, the atmosphere of the facility improved.[42] The same study found that the installation of smoking rooms led to less public consumption in the vicinity of the facility.[43] The findings of another study suggest that offering smoking/inhalation services at SCSs has the potential to reduce street disorder and encounters with the police.[44] Finally, of critical importance, allowing smoking at SCSs also provides clients with the option to switch to this less harmful mode of consumption. In the Netherlands, over time, for instance, there was an important shift from injection to smoking—only 10% of SCS clients in the Netherlands now inject, which was associated with a significant decrease in syringe sharing.[45]

Given the available evidence and potential health and community benefits, SCSs for a broad range of routes of administration should be established. Countries currently considering the establishment and implementation of SCSs should ensure that people who smoke stimulant drugs are accommodated at the sites by providing tailored services, including the provision of sterile smoking supplies and a well-ventilated and separate smoking space. Addressing the panoply and full range of drug-related harms across different types of drugs and modes of consumption will ensure the widest possible benefits for both people who use drugs and the larger community.

Funding for Outreach

Harm reduction programs in the United States and other countries are largely targeted toward people who inject opioids, but the harm reduction needs of people who use stimulants are distinct from people who use opioids in several ways.[46] Needs may differ even among people who inject stimulants. Stimulant injection, for example, involves more frequent injection, increased sexual risk behaviors, chaotic injecting, home production, and younger ages.[47] And, research shows that traditional harm reduction programs may fail to reach people who use stimulants problematically.[48] One study noted that developing opportunities to maintain contact with stimulant-using populations should be an important aim of harm reduction in the context of public health.[49] Funding should be provided for each existing syringe access program to add a staff position or otherwise increase capacity to conduct outreach among the stimulant-using population in their area and to engage them in care and services. Legal barriers to adapting opioid-centered programs for stimulant-using populations should also be removed, such as any requirement for a one-to-one syringe exchange or limit on syringe possession, which do not account for the frequent injection by people who use stimulants. Finally, consideration should be given to the creation of "secondary exchanges," where high frequency injectors can access syringes around the clock, as well as peer-driven strategies to help reach those not attending established service programs.[50]

Increase Access to Contingency Management

Contingency management is an addiction treatment intervention that aims to change behavior through the provision of various incentives, such as money, vouchers, or prizes for abstaining from drug use or adhering to other treatment goals. Contingency management has proven more effective at achieving periods of drug abstinence than many other behavioral treatments, particularly for stimulant-using populations.[51] A recent meta-analysis found that contingency management alone and contingency management in conjunction with other treatments were the only interventions that consistently produced better results for methamphetamine and cocaine use disorder treatment.[52] Another meta-analysis found that contingency management resulted in longer abstinence while in treatment 61% of the time compared to 39% for other treatment modalities.[53] One study on stimulants specifically found that submission of stimulant-negative urine samples was twice as likely for the contingency management group compared to the usual care participants.[54] Achieving 4 or more, 8 or more, and 12 weeks of continuous abstinence was approximately 3, 9, and 11 times more likely, respectively, for contingency management compared to usual care participants.[55] Contingency management is a particularly adaptable treatment intervention[56] that can be utilized on its own, added to psycho-social treatment programs[57], such as cognitive behavioral therapy, and also delivered in non-traditional treatment settings.[58] Contingency management is also cost-effective[59] and produces virtually no adverse events.[60]

Despite its proven efficacy, safety, and cost-effectiveness, however, contingency management programs remain relatively inaccessible to stimulant-using populations. It is the least implemented evidence-based substance use disorder treatment[61]; a travesty considering it is the most effective treatment currently available for stimulant use disorders. According to the National Survey of Substance Abuse Treatment Services, only 55% of publicly funding treatment facilities in the United States offered any form of contingency management or motivational incentives in their settings[62] and it is unclear if these services were provided in a faithful manner to the contingency management model. McPherson et al. note: "One of the biggest barriers to utilizing [contingency management] in real-world treatment situations effectively is not a scientific one, but a political one. Convincing policy makers of why this should be more broadly integrated into drug- and alcohol-use-disorder treatment has proven difficult."[63] Further, insurance reimbursement for contingency management services is limited due to conflicts with federal and state fraud and anti-kickback laws.[64] These legal barriers should be removed to allow for a reliable financial stream to pay for contingency management. State and federal funding and incentives for the implementation of additional contingency management programs for people who use stimulants is urgently needed, particularly given the recent emphasis on, and exclusive funding for, treatment of opioid use disorder despite a significantly higher prevalence of stimulant use in the United States.[65]

Provide Adequate Housing

Lack of stable housing leads to poor health outcomes and can increase the harms of risky stimulant use. In order to prevent and reduce the harms of stimulant use, government funds should be appropriated toward creating and supporting "housing first" models of care and supplementing treatment programs with housing incentives for participants. Indeed, as one study noted, homelessness "necessitates a continuous search for food and water, which seriously interferes with treatment participation."[66] Another study found that while day treatment reduced cocaine use among non-homeless participants, none of the homeless participants were retained in treatment.[67]

In a study evaluating a "housing first" approach compared to a "treatment first" approach for homeless adults with serious mental illness and co-occurring substance use disorder, housing first clients were far less like to use drugs or to need addiction treatment services.[68] The results are especially noteworthy because the housing first participants were not prohibited from using drugs in order to retain their housing and access to services, while the treatment first participants had to remain abstinent in order to receive transitional housing.[69] The authors conclude that "having the security of a place to live appears to afford greater opportunities and motivation to control substance use when compared

to the available alternatives of congregate residential treatment or a return to the streets."[70] Another study found that among 196 crack/cocaine-dependent individuals receiving either day treatment and no housing, housing contingent on drug abstinence, or housing not contingent on abstinence, both housing groups demonstrated superior treatment outcomes over the non-housing group.[71] Although providing low-barrier housing to people who use stimulants improves outcomes, research suggests this population may not be as successful in maintaining housing compared to people who primarily use other substances.[72] This suggests more wrap-around services designed specifically for people who use stimulants may be needed.

Eliminate Criminalization of Personal Drug Use

Criminalizing people who use drugs, including stimulants, amplifies the risk of fatal overdoses and diseases, increases stigma and marginalization, and drives people away from needed treatment, health and harm reduction services.[73] Reducing the role of the criminal justice system is therefore critical to ensuring that people who use stimulants are able to access the vital treatment, medical, and harm reduction services that improve outcomes and enhance quality of life for individuals, families and communities.

Decriminalization is commonly defined as the elimination of criminal penalties for drug possession for personal use so that people who merely use or possess small amounts of drugs are no longer arrested, jailed, prosecuted, imprisoned, put on probation or parole, or saddled with a criminal record. Nearly two dozen countries have taken steps toward decriminalization (the best and most well-documented example is Portugal, which in 2001 eliminated criminal penalties for low-level possession and use of all illicit drugs).[74] Empirical evidence from the international experiences demonstrate that decriminalization does not result in increased use or crime, reduces incidences of HIV/AIDs and overdose, increases the number of people in treatment, and reduces social costs of drug misuse.[75] In 2020, Oregon voters approved a landmark ballot initiative decriminalizing personal drug possession and funding substance use disorder treatment, recovery, harm reduction, and housing, making Oregon the first state to decriminalize personal drug posssession.[76] Other jurisdictions should follow Oregon's example and remove all criminal penalties for possession of small amounts of controlled substances for personal use.

Explore Potential Regulatory Models

While decriminalization is a critical first step, it does not alleviate the problems associated with an illicit supply, including adulterants and the criminalization of those who may sell drugs to support their own use and other low level sellers. Policymakers should investigate regulatory models that would insure a safe supply and offer opportunities for those who use stimulants to access needed health care and treatment services.[77] Programs that supply legal opioids (sometimes know as heroin assisted treatment or injectable opioid treatment) have been operating in several countries for decades with extremely promising results.[78] In light of the COVID-19 pandemic, health officials in British Columbia, Vancouver recently loosened restrictions in order to allow doctors to prescribe hydromorphone for people who use illicit opioids and either Dexedrine or Ritalin for people who use cocaine or methamphetatamine.[79] Such programs for stimulants may present new challenges since needs may differ from those who opioids, given the frequency of use, but the potential benefits merit implementing and evaluating such models more widely.

Funding more stimulant-specific research

Despite the widespread prevalence of stimulant use, few evidence-based psychosocial interventions or treatments exist to treat stimulant use disorders[80], and those that are available, such as contingency management, are not widely implemented. In addition, there are no internationally recognized medications for the treatment of stimulant use disorders.[81] Funding priorities must include expanding the evidence-based treatment options for people with stimulant use disorders, and this requires extensive investment in grants to explore this issue.

CONCLUSION

In light of the overdose crisis in North America, policy proposals have been made to reduce the harms associated with opioid use. However no such proposals have been made to tackle problematic stimulant use despite increasing overdose deaths involving stimulants. A policy agenda to reduce the harms of stimulant use must prioritize expanding the evidence base of treatments to address use, expand access to harm reduction interventions, address social determinants of health, and move away from criminalizing punitive approaches that exacerbate stigma and marginalization of people who use stimulants.

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