

EMERGING DRUGS IN THE AMERICAS: NEW PSYCHOACTIVE SUBSTANCES, INCLUDING SYNTHETIC OPIOIDS

■ BACKGROUND

Drug problems in the Western Hemisphere have long revolved around plant-based substances -- primarily cocaine, which is endemic only to the Americas. Heroin and cannabis, though hardly exclusive to the region, are also produced in substantial quantities in several countries. This availability, in turn, has affected patterns of use. While North America has traditionally had one of the highest past year prevalence of cocaine in the region, several countries in South America, including Argentina, Chile, and Uruguay, report past year prevalence of cocaine that rival those of North America.

Similarly, the nonmedical use of prescription medications, especially opioid analgesics, is of growing concern. The United States and Canada have experienced alarming rates of substance use disorder and overdose deaths from these medications. Moreover, some individuals who initiated use with prescription painkillers went on to develop opioid use disorder and transitioned to illicit opioids, such as heroin and fentanyl¹. Such a trajectory has so far not been documented in the rest of the region, but some evidence suggests that prescription opioid use is on the rise in parts of South America². If anything is to be learned from the North American experience, it is that excessive supply of prescription opioid analgesics increases the likelihood of opioid use disorder and its attendant problems.

Though traditional plant-based drugs have long dominated the regional drug picture, with North America serving as the principal consumer of illegal drugs produced in Latin America and the Caribbean, developments in the last five to ten years have started to reshape this pattern. The emergence of new psychoactive substances (NPS) -- drugs that are not subject to prohibitions or control but generally produce similar effects to those that are controlled -- is of growing concern to policy-makers, law enforcement, and public health authorities. Fentanyl, which is a controlled synthetic opioid, is sometimes lumped with NPS given that many producers in Asia that manufacture NPS also

¹ Cicero, T.J., Ellis, M.S., and Kasper, Z.A., 2017. Increased use of heroin as an initiating opioid of abuse. *Addictive behaviors*, 74, pp.63-66.

² United Nations Office on Drugs and Crime. 2019. World Drug Report 2019 (United Nations publication, Sales No. E.19.XI.8). <https://www.unodc.org/LSS/Page/NPS>

synthesize fentanyl. In the case of most NPS, the harms are largely unknown, and the substances are often supplied, sometimes unwittingly, to users of traditional drugs. This complicates many public health and drug control efforts.

NPS is a broad category that includes a diverse range of chemicals that are largely synthetic; the United Nations Office on Drugs and Crime notes that nearly 900 new substances have been reported to authorities in the past decade³. Two-thirds of these chemicals are cathinones, which are stimulants that mimic the effects of cocaine or ecstasy, or synthetic cannabinoid receptor agonists, which mimic the effects of tetrahydrocannabinol (THC) -- the principal psychoactive ingredient in cannabis. The remainder tend to be similar to hallucinogens and sedatives or dissociatives, but there has also been a rising number of novel synthetic opioids reported in recent years⁴.

NPS has been a concern in major consumer markets in Europe and the United States⁵, and early indicators in other parts of the Americas suggest that these substances may be emerging in some markets in the region. The number of new chemicals arriving in Europe has slowed, but it is unclear whether markets for these drugs have stabilized⁶. Across the Americas, it is too early to determine if these substances will displace traditional plant-based drugs like cocaine, heroin, or cannabis -- though that may be a concern to authorities in some places⁷. In any case, their arrival has important policy implications, and authorities may need to consider the various effects NPS can have on existing markets and consumer behaviors. For example, some NPS are marketed as traditional drugs such as heroin, cocaine, or ecstasy. In some Latin American markets, a phenethylamine such as 25B-NBoME may be offered as a classic hallucinogen such as LSD (lysergic acid diethylamide). This may complicate efforts by drug users to avoid harm if they unintentionally consume a substance they thought was LSD but was in fact some other hallucinogen. In North America, this is documented in heroin markets where some dealers market novel synthetic opioids or fentanyl as heroin⁸.

FINDINGS FROM THE REPORT ON DRUG USE IN THE AMERICAS

As noted by the Report on Drug Use in the Americas 2019 -- published by the Inter-American Drug Abuse Control Commission (CICAD) of the Organization of American States (OAS) -- the number of NPS reported started to rise in many parts of the Hemisphere in the last decade. Several synthetic cannabinoids and cathinones were reported in North America around the late 2000s, but in South America these substances were first detected in 2013. Since then, the variety and number of new substances have grown.

³ Ibid.

⁴ Reuter P., Pardo, B. 2017. New psychoactive substances: Are there any good options for regulating new psychoactive substances? *International Journal of Drug Policy*. Feb 1; 40:117-22.

⁵ European Monitoring Centre for Drugs and Drug Addiction and Europol. 2019. EU Drug Markets Report 2019.

⁶ Ibid.

⁷ Pardo, B., Taylor, J., Caulkins, J., Kilmer, B., Reuter, P., Stein, B. 2019. *The Future of Fentanyl and Other Synthetic Opioids*. RAND Corporation.

⁸ Ciccarone, D., Ondocsin, J., Mars, S.G. 2017. Heroin uncertainties: Exploring users' perceptions of fentanyl-adulterated and-substituted 'heroin.' *International Journal of Drug Policy*. Aug 1; 46:146-55.

Yet given the novelty of NPS, many countries still do not collect reliable data on use or supply. Drug use surveys often do not ask about consumption of new substances, and even if they did, it is unlikely that users would know the extent to which they were consuming a particular chemical. (In other words, they may assume that the bag of powder or pills they purchased was cocaine or ecstasy, but in fact it was some other novel substance.) In some cases, retail-level sellers may not even be aware that they are misrepresenting their products to buyers. Likewise, drug control authorities may not be testing drug seizures accurately, given a lack of resources. Therefore, estimates of NPS exposure may suffer from underreporting.

The Report on Drug Use in the Americas documents several cases in which NPS have been discovered by national authorities. In general, there has been a longer research focus and attempts to quantify the NPS phenomenon in some youth drug use surveys in the United States, at least as it pertains to synthetic cannabinoids and cathinones. National school surveys in the United States show that past year prevalence rates for some NPS have fallen dramatically in recent years. In 2011, more than 11% of U.S. 12th graders reported using synthetic cannabinoids; at the time, this was the second most popular drug used by this age group, after cannabis. In 2016, the latest year for which data are reported, about 3.5% of U.S. 12th graders reported using synthetic cannabinoids. Rates of cathinone use remained flat over this period, hovering around 1%. Similar trends were reported in university students, with past year prevalence rates dropping from 8.5% in 2011 to 1.3% in 2016.

Elsewhere in the hemisphere, few surveys ask about use of NPS, and many countries lack the technical capability needed to detect emerging drugs, complicating a thorough analysis; however, the Report on Drug Use in the Americas includes several findings based on work in the region. The number of new chemicals showing up in drug markets in South America reported in drug seizures has increased since their first appearance in 2013. In 2016 alone, authorities reported 60 different substances. Between 2013 and 2017, some 130 different NPS were reported in the region. The largest share of new substances were stimulants (43%), followed by hallucinogens (30%) and synthetic cannabinoids (23%). Interestingly, hallucinogens showed up more frequently than synthetic cannabinoids; elsewhere, it tends to be the other way around. Data on Central America and the Caribbean are not reported.

The report noted that some NPS are sold as traditional substances. In 2013, self-reported surveys of lifetime drug use in Colombia identified very high rates of use of LSD, in some cases making it the drug with the fourth-highest rate of lifetime use after cannabis, cocaine, and *bazuco* (a smokable form of cocaine). In one survey of university students in the region, Colombian respondents reported a past year prevalence rate of LSD at over 4% -- three percentage points higher than the second highest, Ecuador, at 1%. Chemical analysis of seizures shows that some substances sold as LSD or ecstasy were in fact from the NBoMe class of NPS, which produce similar hallucinogenic effects but might be more harmful. Therefore, self-reported use behaviors may be inaccurate, given that suppliers may conceal the distribution of NPS as traditional drugs. This phenomenon of selling NPS, particularly the NBoMe series drugs, as traditional substances has also been reported in Brazil and Chile. Beyond novel hallucinogens, the report notes use of synthetic cannabinoids by students in Bolivia, Colombia, Ecuador, and Peru, though rates are very low.

The large number of new hallucinogens reported by authorities in South America may be related to the higher prevalence rates reported for LSD or ecstasy use in these countries. It may be that drug distributors are substituting classic hallucinogens with a growing cast of NPS. Reasons behind such substitution are still unclear, but one possible explanation includes access and availability via the Internet. Many NPS and controlled drugs of synthetic origin, such as fentanyl, are manufactured in Asia and concealed easily through legitimate commercial trade. Their novelty and supply may be changing the future of drug policy in the region.

■ POLICY IMPLICATIONS

The arrival of NPS has several important implications for drug policy in the region. NPS are not like traditional drugs, and therefore policy must account for some of the new challenges these substances pose.

First, it appears that most NPS serve existing drug markets and are unlikely to create new markets on their own⁹. Though there are hundreds of novel NPS, most enter and exit drug markets; few gain any appreciable share. Given that many of these substances produce similar effects, each new entrant crowds out others. Though the numbers of NPS are troubling, this should not overwhelm decision-makers. The focus, instead, should be on tackling NPS that appear quickly and generate substantial harm -- even if they do not remain in the market -- while also handling the possible long-term effects and harms from the small minority of NPS that do remain. NPS attract different niches, including individuals who seek out these substances because of their price, or to avoid legal sanctions or detection during routine drug testing¹⁰. This appears to be the case with synthetic cannabinoid receptor agonists, which are sometimes sold as legal alternatives to cannabis. In these cases, policy responses may need to be specific to these populations.

Second, the arrival of new substances may increase harms, as drug users or suppliers may not be aware of their effects; in fact, many NPS have never been used by humans before. This is especially problematic when dealers offer NPS as traditional substances, which appears to be happening with novel synthetic opioids and fentanyl that are often sold as heroin in parts of North America¹¹. Such deception can be deadly, especially if users assume they are consuming a drug with which they are familiar.

Third, the novelty of many NPS often complicates detection efforts and available responses. Health professionals and first responders may not know how to treat someone suffering from an acute overdose, and law enforcement may find it difficult to prosecute suppliers, as many of these substances are not technically prohibited by law. Drug control agencies are tasked with responding to and policing an increasing number of new chemicals, many of which have been designed or tweaked to evade detection and circumvent existing laws. In short, these substances add new dimensions and challenges to responding to the harms they generate.

Thinking more broadly, the emergence of synthetic substances that mimic the effects of traditional drugs -- such as methamphetamine, LSD, ecstasy, cocaine, and heroin -- may have long-lasting effects across all levels of supply networks. The rise of synthetic opioids, namely fentanyl illicitly manufactured in Asia, in some markets in North America is of particular concern. For example, an examination of drug overdose deaths and seizures indicates that in some parts of the United States, heroin is being supplanted by synthetic opioids, some of which are novel¹². This market transition is not well understood but appears to be driven by drug suppliers who may be adopting cheap synthetic opioids to boost profits. Additionally, in Mexico, which supplies almost all of the heroin consumed in the United States, poppy farmers have been reporting steep declines in farm-gate prices. It is unclear if these declines are due to increased poppy cultivation in recent years or to the arrival of cheap and easy-to-manufacture synthetic

9 Reuter and Pardo, 2017.

10 Ibid.

11 Ciccarone et al., 2017.

12 Pardo et al., 2019.

opioids¹³. Nonetheless, should novel synthetic opioids increasingly spread across U.S. drug markets, poppy farmers may have fewer buyers. In fragile sociopolitical environments, such disruption may have wide-ranging implications beyond the immediate illicit economy, putting pressure on national authorities to respond.

■ POTENTIAL POLICY RESPONSES

In terms of policy responses, a first step is to invest in improved data collection and monitoring, such as those found in Europe¹⁴. Early warning systems have proven to be useful tools for gathering data quickly on changes in the drug market. Nevertheless, most existing policy tools are likely not up to the challenge of dealing with these new substances that are sought by users and are cheaper to produce or smuggle than traditional drugs. Monitoring markets requires investing in improved routine analysis of drug seizures, public health impacts (for example, overdose and emergency service calls), and other drug-related outcomes. Such efforts could include wastewater testing and expanded survey panels aimed at trying to ascertain user preferences and behaviors. Given that NPS infiltrate markets that already have a demand for traditional drugs, countries that have entrenched drug markets for heroin, cocaine, ecstasy, and cannabis should consider the possibility that new drugs could enter these markets. Should authorities detect seizures of NPS sold as traditional drugs, efforts could be made to inform drug users about the elevated risks in the drug supply. For example, some harm reduction groups warn users through information campaigns when pills sold as ecstasy contain only NPS. Similar efforts could be made when authorities find novel opioids or controlled synthetic opioids, like fentanyl, in the heroin supply or cathinones sold as cocaine.

The ease with which NPS can be obtained online and shipped presents a challenge to drug interdiction efforts. Authorities may not have the available equipment or knowledge/training to detect or interdict shipments, limiting the success of supply-side interventions aimed at reducing availability. Training in practitioners in detection and sharing information and working with demand-side indicators can enhance the overall picture of the changing NPS problem. Policy-makers and authorities need to start thinking more innovatively when responding to these new threats. Interagency and multilateral early warning systems will be of growing importance as NPS continue to diffuse in quantity and variety across the region. The unfolding problem in major drug-consuming markets in the Western Hemisphere should serve as a useful case in point: NPS have the ability to enter some markets, sometimes concealed as traditional drugs. Limiting responses to tools that are already available will not be enough to effectively respond to the new challenges posed by NPS.

13 Ibid.

14 Hondebrink, L., Nugteren-van Lonkhuyzen, J.J., Van Der Gouwe, D. and Brunt, T.M., 2015. Monitoring new psychoactive substances (NPS) in The Netherlands: data from the drug market and the Poisons Information Centre. *Drug and alcohol dependence*, 147, pp.109-115.