GLOBAL ASSESSMENT OF SYNTHETIC DRUGS, 2015

AMPHETAMINE-TYPE STIMULANTS AND NEW PSYCHOACTIVE SUBSTANCES
Contents

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• *Amphetamine-Type Stimulants* (ATS): global and regional perspectives.
• *New Psychoactive Substances* (NPS): global and regional perspectives.
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• Synthetic Drugs and NPS – Challenges for Latin America.
**Brief overview:**

**Synthetics Monitoring: Analyses, Reporting and Trends - SMART**

- It is a strategic response to the problem of synthetic drugs and new psychoactive substances.
- Launched in September 2008, Global SMART provides capacity building in East and South-East Asia, the Pacific, the Near and Middle East, Latin America and Africa and regularly reviews the global ATS situation.
- From 2011 CICAD/OAS supports this programme in Latin America.
- Features of Global SMART are online data collection, situation reports and regional assessments. The first global situation assessment on NPS *“The challenge of new psychoactive substances”* was published in March 2013, pursuant to Commission on Narcotic Drugs resolution 55/1 (2012). The SMART Early Warning Advisory web-portal offers regularly updated information on NPS and related legislation.
- **Objective:** enhances the capacity of Member States in main regions to generate, manage, analyze, report and use synthetic drug information to design effective policy and programme interventions.
Global SMART- a resource of global and regional reports -updated- on synthetic drugs and NPS
-246 million use some of the drugs listed below, at least once, in 2013.

-27.4 million were problematic drug users.

-5.2% was the past-year prevalence.

(5.2% of the population aged 15-64, used drugs at least once in the last year).

ATS and opioids are among the substances most commonly used after cannabis.

<table>
<thead>
<tr>
<th>TABLE 1. Global estimates of the use of various drugs, 2013</th>
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<tr>
<td>Percentage of population that has used the drug</td>
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<tr>
<td>low</td>
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<td>-----</td>
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<tr>
<td>Cannabis</td>
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<td>Opioids</td>
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<tr>
<td>Opiates</td>
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<tr>
<td>Cocaine</td>
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<tr>
<td>Amphetamines</td>
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<tr>
<td>&quot;Ecstasy&quot;</td>
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<td>All illicit drug use</td>
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Source: UNODC, responses to annual report questionnaire.

Note: Estimates for adults aged 15-64, based on past-year use.
Global seizures five-year change

- 15% decrease in "ecstasy"
- Stable levels of amphetamine
- 158% increase in methamphetamine

Global number of users

- 18.8 million "ecstasy" users
- 33.9 million users of amphetamines and prescription stimulants

Note: Data for seizures and number of users are from 2013. Amphetamines include both amphetamine and methamphetamine.
Total reported ATS seizures worldwide, 2009-2013

Source: UNODC, responses to annual report questionnaire, 2009-2013.

Note: The category “non-specified ATS” includes seizures reported to UNODC as ATS without indicating a specific substance and excludes prescription stimulants.
The challenge of New Psychoactive Substances
Definition(s) New Psychoactive Substances

- Produced or recently introduced and now for first time discovered, not having existed before.
- They existed before, but they have been recently experienced or purchased for the first time.

Affecting the Central Nervous System - CNS -

- A particular type of substance with uniform properties.
- A chemical or intoxicating, stimulating or narcotic drugs.

- Recently introduced synthetic compound (undeveloped or failed medicine).
- Recently produced synthetic compound
- Newly discovered natural product (could have a traditional or exotic use).
- Newly abused / new mode of use to achieve psychoactivity (effect on CNS).
- It should be recognized and characterized both chemically and pharmacologically.

- They imply a serious threat to public health.
- The term "new" does not necessarily refer to new inventions - several NPS were synthesized for the first time 40 years ago.
- They don't have or only have a limited therapeutic value.

- Most of them (semi) synthetic compounds made from readily available starting materials (precursors).
- It can also be a natural product (with difficulty identifying the active ingredient).
Aminoidanes

Sold by their ability to produce empathogenic and entactogenic effects of serotonin releasing drugs, such as MDMA.

Piperazines - These substances are frequently sold as ‘ecstasy’ due to their central nervous system stimulant properties. The most commonly reported members of this group are benzylpiperazine (BZP) and mCPP (1-(3-chlorophenyl) piperazine).

Ketamine - A human and veterinary anaesthetic which acts as a stimulant at low doses and a hallucinogen at high doses. It is one of the most widespread NPS in Asia.

Phenethylamines - This group contains substances related to amphetamine and methamphetamine, and generally produces stimulant effects. However, modification of these compounds can lead to potent hallucinogens such as Bromo-Dragonfly.

Synthetic cannabinoids - These are cannabinoid receptor agonists which produce effects similar to those of delta-9-tetrahydrocannabinol (THC), the principal psychoactive component in cannabis. Synthetic cannabinoids are often laced on herbal products and sold as spice, K2, Kronic, etc.

NPS

Categories of new psychoactive substances sold in the market

Triptaminas

Search for its hallucinogenic effects. Natural tryptamines are available in preparations of dried or brewed mushrooms, while tryptamine derivatives are sold in capsule, tablet, powder or liquid form.

Plant-based substances - This group includes plants with psychoactive properties. The most frequently reported are:

- Kratom (Mitragyna speciosa Korth), a plant indigenous to South-East Asia that contains the alkaloid mitragyne; a stimulant at low doses and sedative at high doses.
- Salvia divinorum, a plant indigenous to forest areas in Oaxaca, Mexico, which contains the active ingredient salvinorin A, a hallucinogenic substance.
- Khat (Catha edulis), a plant native to the horn of Africa and the Arabian peninsula. The leaves of the plant are chewed, resulting in the release of the stimulants cathinone and cathine.

Synthetic cathinones - These are analogues/derivatives of the internationally controlled substance cathinone, one of the active components of the khat plant. They generally have stimulant effects and include frequently reported NPS such as mephedrone and MDPV.

Other substances - such as aminoidanes (stimulants), phenylethylamine-type substances (hallucinogens) and tryptamines (hallucinogens).
Number of NPS informed by group of substances, 2014

Source: UNODC, early warning advisory on NPS, 2014.
UNODC EWA – Survey on NPS reveals 69 newly emerged substances in 2014
157 NPS cases reported
54 phenethylamines, 26 synthetic cannabinoids, 24 piperazines, 18 synthetic cathinones, 16 hallucinogenic drugs, 11 plant-based substances, 2 tryptamines, and 2 aminoindananes.
Mexico has presented NPS in all categories, and Argentina and Brazil in seven.
Treatment problems associated

New Psychoactive substances

- Little/no research into treatment
- Harms still poorly understood
- NPS effects are different to traditional drugs
- Rapidly changing profile

New populations

- Different context of use, sometimes with high risk behaviors
- Not ‘typical’ drug user“ How to engage?
Challenge for specialist drug services

• Clinical staff have **poor knowledge** of changing patterns of NPS use
  – ‘**technical**’ knowledge (what are the drugs, how do they work)
  – ‘**cultural**’ knowledge (who is using, how are they using)
  – ‘**clinical**’ knowledge (how to clinical manage acute/chronic presentation)
  – ‘**service**’ knowledge (when and where to refer)
Frontline clinical staff from specialist drug service in United Kingdom

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<th>Heroin, crack, alcohol</th>
<th>‘Club drugs’ including NPS</th>
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<td>High confidence in identification and clinical management</td>
<td>80%</td>
<td>30%</td>
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- 75% requested further training on club drugs and NPS

Fexi P, Jones T, Bowden-Jones O  unpublished data
CHAPTER 7: NEW PSYCHOACTIVE SUBSTANCES AND OTHER EMERGING DRUGS IN THE REGION

NEW PSYCHOACTIVE SUBSTANCES

In recent years, the illicit drug market has seen the appearance of a number of new substances that often have chemical and pharmacological properties similar to internationally controlled substances. This variety has never been greater than it is now.

These new psychoactive substances (NPS) have been termed "designer drugs," "legal highs," "benzodiazepines," and "miscellaneous psychoactive substances." In an effort to clarify the language, which uses the term "psychoactive substance," which are defined as "substances of abuse, which is in a pure form or in a preparation, that are not controlled by the 2005 Drug Convention or the Convention on Psychotropic Substances of 1971," and which may pose a threat to public health; the word "new" does not necessarily refer to new introductions, a number of NPS were first synthesized forty years ago, but rather means they are substances that have appeared recently on the market and that have not been scheduled in the U.N. Convention.

NPS mimic the effects of controlled substances.

Many new psychoactive substances on the market contain cellular products that have structural and/or pharmacological properties similar to the substances under international control and are designed to mimic them.

For example, synthetic cannabinoids, which include the JWH series (such as JWH-018), are compounds that mimic THC (delta-9-tetrahydrocannabinol), which is the principal psychoactive compound in marijuana.

Synthetic cannabinoids, which include substances like methadone, methadone and MOPV, may produce almost all other psychoactive effects similar to those of a traditional cannabinoid.

Some substances, such as the 2C series (such as 2C-15 and 2C-B), produce effects similar to those of lysergic acid diethylamide (LSD), but many of them are not controlled.

Other substances which have their phenylalkylamine group have been reported as "mushrooms" (or "magic mushrooms," also known as "bogomoloides" or "bogomoloids") and are found in fungi. These substances are also controlled.
NEW PSYCHOACTIVE SUBSTANCES IN NORTH AMERICA

Figure 7-1: Past year prevalence of NPS use in United States 12th grade students, 2011-2014

Graph 7-2: Past month prevalence of New Psychoactive Substances by grouped grades, grades 7-12, Canada, 2012-2013

Graph 7-4: Lifetime prevalence of drug use among secondary students, Mexico City, 2012
• Fuente: Cuestionario para los informes del OID/CICAD

• Fuente: Estudio de Drogas en la Población General de Colombia, 2013
NPS are being sold in illicit drug markets

- A recent feature has been the emergence of cases in which the NPS has been sold in the markets of ATS and other illicit drug markets.
- Countries in most regions of the world have reported various NPS sold as "ecstasy", which was traditionally synonymous with MDMA.
- Recently, police authorities in some countries of South America have reported a substance being sold as "LSD" in the illicit drug market.
NPS are being sold in illicit drug markets

- In May 2013, Chile's National Police seized 800 stamps, they which are believed contained the hallucinogenic substance LSD, but actually consisted in 25I-NBOMe. The drug came from a batch smuggled from Spain.

- In June 2013, Colombian Observatory on Drugs informed, through its early warning system (EWS) which substances sold as LSD actually contained two compounds NBOMe: NBOMe-25B and 25C-NBOMe.

- Thereby, reports of high consumption of LSD among undergraduates students in some countries in the region could be misleading.
In May 2015 the results of a survey on drug use among undergraduate students in Uruguay indicated that the second most commonly used drug after marijuana was "LSD", surpassing cocaine.

In June 2015, Uruguayan Observatory on Drugs informed, through its early warning system (EWS) which substances sold as "LSD" actually contained 4-Bromo-2,5-dimethoxyamphetamine (DOB).

In general, it is not clear whether these new substances are replacing other controlled substances, either in the short or long term, or if they are simply being used as a complement to the existing range of drugs under international control.
Problems derived from emergence of NPS

• **Drug users.** They may not be aware that they are taking a NPS instead of LSD, ecstasy or 2C-B, with risk of a possible overdose, with serious negative health effects, while effects on the body are not yet completely understood.

• **Health services.** They may not be aware of the scope of the NPS in the market, its pharmacology and toxicology, how to identify them, or the best way to help in emergencies.

• **National drug labs.** They may not be able to identify the wide range of NPS that are already available to users.

• **Police.** They may not have the means to detect NPS with current methods.

• **Legal systems.** may not provide sufficient tools for interventions.
UNODC Early Warning Advisory on NPS (EWA)

- The ATS global market expansion and the dynamic nature of the situation about NPS highlight the need for a global surveillance, and exchange of knowledge based on individual experiences from different Member States.
- The review of scientific evidence, forensic data and information are essential to generate an effective response to the rapid growth of the market for synthetic drugs.
- In order to supplement the mechanism currently available for global monitoring of synthetic drugs - such as the Global SMART Programme - UNODC launched in June 2013 the Early Warning Advisory on NPS (EWA).
- The UNODC Early Warning Advisory is designed to enable timely and complete exchange of information on NPS, including analytical methodology, reference documents, and data trend analysis, in order to provide a global benchmark.
Response of national legislation to changes – From 2009

- Using (other) laws*, not drug laws
  - Penalization of supply
- Modifying drug law
  - Penalization of supply and/or temporary possession or evaluation mechanisms of risk control
- Introducing new law on NPS
  - Penalization of supply
    ✓ or combinations thereof
- Pharmaceutical legislations
- Consumer protection legislation

* Sometimes controversial
Support from UNODC to the Member States

Guidelines for the acquisition of more competent portable device for the rapid detection of NPS
Progress in the countries of the region
Conclusions and recommendations

Synthetic Drugs and NPS: Challenges for Latin America

• While marijuana is the most popular drug, ATS use along with cocaine play an important role in Latin America's youngest population.
• The tools for collecting data in many countries need to be improved to reflect the real use of ATS and NPS.
• The drug-testing procedures in specialized forensic laboratories should include synthetic drugs and NPS.
• Query: The low level of ATS seizures in most countries is due to: the absence of ATS, the lack of enforcement capacity or a difference of priorities (cocaine)?
• It's happening now - The NPS are emerging in several countries, pointing to the markets of existing synthetic drugs.
• Addressing the drug problem in Latin America requires approaches that include ATS and NPS.
• **ATS/NPS requires identification and awareness!**
Conclusions regarding treatment

- NPS presents a huge challenge for treatment services, both specialized drug services and other health settings.
- Limited knowledge on clinical harms, user profiles, engagement strategies and treatment approaches.
- Responses require adaptation of existing evidence-based interventions supported by investment in training and further research.
- Programs should be developed and / or responses specifically focused on these new challenges.
UNODC/CICAD Global SMART Programme

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More resources for information on ATS/NPS: