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# GLOBAL SMART UPDATE



Special Segment  
**Injecting use of synthetic drugs**

**2016**

## About the SMART Update

The use of synthetic drugs constitute one of the most significant drug problems worldwide. After cannabis, amphetamine-type stimulants (ATS) are the second most widely used drugs across the globe, with use levels often exceeding those of heroin and/or cocaine. Along with ATS, the continued growth of the *new psychoactive substances* (NPS) market over the last years has become a policy challenge and a major international concern. A growing interplay between these new drugs and traditional illicit drug markets is being observed. By December 2015, the emergence of NPS had been reported from 101 countries and territories. Trends on the synthetic drug market evolve quickly each year.

The UNODC Global Synthetics Monitoring: Analyses, Reporting and Trends (SMART) Programme enhances the capacity of Member States in priority regions to generate, manage, analyse, report and use synthetic drug information to design effective policy and programme interventions. Launched in September 2008, the Global SMART Programme provides capacity building to laboratory personnel, law enforcement and research officers in the Pacific, East and South-East Asia, South Asia, the Near and Middle East, Africa and Latin America; and regularly reviews the global amphetamine-type stimulants and *new psychoactive substances* situation. Its main products include online drug data collection, situation reports, regional assessments and the UNODC Early Warning Advisory (EWA) on *new psychoactive substances*. The EWA is a web portal that offers regular updates on *new psychoactive substances*, including trend data on emergence and persistence, chemical data, supporting documentation on laboratory analysis and national legislative responses (available at: [www.unodc.org/NPS](http://www.unodc.org/NPS)).

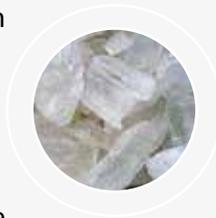
The Global SMART Update (GSU) series is published twice a year in English and Spanish and provides information on emerging patterns and trends of the global synthetic drug situation in a concise format. Electronic copies of the Global SMART Updates and other publications are available at: [www.unodc.org/unodc/en/scientists/publications-smart.html](http://www.unodc.org/unodc/en/scientists/publications-smart.html). Past issues have covered topics such as legal responses to NPS, key facts about synthetic cannabinoids, regional patterns of methamphetamine manufacture and the changing nature of 'ecstasy'.\*

## In this issue

Each issue of the Global SMART Update contains a special coverage and thematic segments. The special segment of the current issue sets a focus on injecting use of synthetic drugs – both amphetamine-type stimulants and *new psychoactive substances*. Over the years, several countries in different regions have reported injecting use of amphetamine-type stimulants, such as methamphetamine, and more recently, the injecting use of certain *new psychoactive substances*. However, information on the use prevalence of synthetic drugs in general, and on its injecting use in particular, remains limited in many regions of the world, even more so with regard to *new psychoactive substances*.

The special segment attempts to explore the diversity of the injecting use of stimulants, (including amphetamine-type stimulants and NPS with stimulant effects) in different regions of the world. It demonstrates that injecting use of synthetic drugs with stimulant effects exists in many parts of the world and that injecting use of *new psychoactive substances* with stimulant effects seems to have spread among certain user groups. These aspects are particularly relevant for drug policies and programmes in the light of Sustainable Development Goal 3 “to ensure Healthy Lives and Promote Well-Being for All at All Ages”, and its specific targets of “By 2030, end the epidemics of AIDS, tuberculosis, malaria and neglected tropical diseases and combat hepatitis, water-borne diseases and other communicable diseases” and “Strengthen the prevention and treatment of substance abuse, including narcotic drug abuse and harmful use of alcohol”. Injecting and sexual risk behaviours of people who inject stimulants (including ATS and NPS with stimulant effects) may expose already vulnerable injecting drug users to additional health risks, including an elevated risk of acquiring or transmitting HIV and other blood-borne viruses. It is therefore important that policy responses take this vulnerability into consideration when designing programmes and services to support and protect people who inject drugs.

The thematic segments present detailed and concrete examples of studies on injecting drug use relating to amphetamine-type stimulants and *new psychoactive substances* with stimulant effects. While the number of relevant studies, particularly derived from Europe and North America, is much larger than the small selection presented here, the thematic segment follows the usual geographic approach and covers all major regions equally to the extent possible.



\*The information and data contained within this report are from official Government reports, press releases, scientific journals or incidents confirmed by UNODC Field Offices. An asterisk (\*) indicates that information is preliminary as it stems from 'open sources' where UNODC is waiting for official confirmation. This report has not been formally edited. The contents of this publication do not necessarily reflect the views or policies of UNODC or contributory organizations and neither do they imply any endorsement. Suggested citation: UNODC, Global SMART Update Volume 15, March 2016.

# Injecting use of synthetic drugs

## Introduction

Amphetamine-type stimulants (ATS) are the second most widely used drugs worldwide after cannabis. Several countries in various regions have reported the injecting use of ATS, including amphetamine and methamphetamine. In recent years, a growing interplay between new psychoactive substances (NPS) and traditional illicit drug markets is being observed, and there is concern that synthetic drugs with stimulant effects (e.g. mephedrone<sup>1</sup>), including NPS, are being used by people who inject drugs (PWID).

Given the strong link between injecting drug use and the spread of infectious diseases, raising awareness of the current dynamics, trends and harmful patterns of the injecting use of synthetic drugs, often among marginalized and young drug users is key to preventing and reducing the transmission of blood-borne infections such as HIV and viral hepatitis B and C. Raising awareness also helps to inform country responses in preparing public health, treatment and harm reduction services for the rapidly expanding use of NPS.

## Injecting drug use and health risks

The association between injecting drug use and HIV is well established. Unsafe injecting practices such as sharing contaminated needles are a major risk factor for infection and transmission of blood-borne infections such as hepatitis B and C and HIV. Globally, it is estimated that in 2013, 12.19 million people injected drugs (this corresponded to 0.26 per cent of the adult population aged 15-64). Of those, 1.65 million live with HIV. Two sub-regions stand out as having particularly high rates of HIV infection among PWID. An estimated 29 per cent of PWID are living with HIV in South-West Asia and some 23 per cent in Eastern and South-Eastern Europe.<sup>2</sup>

## A high risk of HIV

People who inject ATS/NPS with stimulant effects are at a higher risk of acquiring and transmitting HIV compared to ATS/NPS users who do not inject or to people who inject other drugs. Risky sexual behaviour such as unprotected sex, to which the stimulant and euphoric effects of synthetic drugs may contribute to, can also be an important factor in acquiring or transmitting HIV, and less often Hepatitis C (HCV). People who inject ATS have been found to have more sexual partners and a greater number of sexual encounters and lower levels of condoms use than people who use ATS/NPS by other routes of administration. People who inject synthetic drugs with stimulant effects

are also prone to inject at a more frequent rate than other PWID and are more likely to share needles or other contaminated injecting paraphernalia.<sup>3</sup> Synthetic cathinones, alone or in combination with other stimulants (e.g. methamphetamine and cocaine) are also injected to enhance sexual experiences and users report compulsive re-injecting due to their relatively short duration of action. Some European countries have reported an increasing number of HIV infection cases among PWID associated with injecting synthetic cathinones.<sup>4</sup>

The analysis presented here explores new localized and national outbreaks of injecting use of ATS and NPS with stimulant effects in different regions. The information on PWID is neither representative of illicit drug use in the general population nor of other drug users (e.g. occasional users, etc.), but it is indicative of emerging trends that may warrant further monitoring and/or investigation.

## Africa

Research on injecting drug use in the region is scarce. However, available data shows that, similar to other regions, heroin remains the most widely injected illicit drug in East and Southern Africa. The injecting use of other illicit drugs such as ATS and cocaine has also been reported.

In a 2015 study on HIV prevalence and HIV related risks among PWID conducted in 5 South African cities,<sup>5</sup> most participants reported injecting use of heroin (97 per cent of male participants and 95 per cent of female participants), followed by participants reporting injecting use of ATS (31 per cent of male participants and 31 per cent of female participants) in the past year. Injecting use of heroin mixed with methamphetamine was also reported, albeit constituting a lower share of users (reported by 9 out of 363 male participants). Among participants, the first drug injecting experience was reported to have been with heroin. However, in the past year, high levels of injecting ATS use were reported in the Western Cape, albeit at lower levels than heroin.

According to data from treatment centres in South Africa, injecting use of methamphetamine was reported by a large number of PWID in 2010 and 2012. In 2010, 18.7 per cent of PWID reported injecting use of meth-

1 Following the international control of mephedrone and its inclusion in Schedule II of the 1971 Convention on Psychotropic Substances (in force since November 2015), this substance has been reclassified from the category of NPS to amphetamine-type stimulants (See UNODC, Terminology and Information on Drugs, Third edition, New York, 2016).

2 UNODC, World Drug Report, 2015.

3 Fischer, A., et. al. "The link between amphetamine-type stimulant use and the transmission of HIV and other blood-borne viruses in the Southeast Asia region." Macfarlane Burnet Institute for Medical Research and Public Health in partnership with the National Drug Research Institute, Curtin University. A report prepared for the Australian National Council on Drugs, June 2012.

4 EMCDDA, *Perspectives on drugs, injection of synthetic cathinones*, May 2015.

5 Scheibe, A., et. al. "HIV prevalence and risk among people who inject drugs in five South African cities". International Journal of Drug Policy (2016).

amphetamine (total sample = 8407 PWID) while in 2012, 20.2 per cent of PWID reported injecting use of methamphetamine (total sample = 19230 PWID). Injecting use of heroin and cocaine was also reported in the study.<sup>6</sup> This study also reports of high-risk sexual practices (such as unprotected receptive anal intercourse and unprotected group sex) among men who have sex with men (MSM) injecting ATS and high levels of needle and syringe re-use among PWID.

## Americas

Recent studies on injecting use of synthetic drugs in the region remain limited, but there are reports of injecting use of methamphetamine and synthetic cathinones in some parts of North America. A recent study on the epidemiology of synthetic drug use among a cohort of PWID in San Diego, California, shows that a considerable proportion of PWID use synthetic drugs and experience harms associated with their use. Of the 485 respondents, 31 PWID (7 per cent) reported lifetime use of synthetic cathinones such as mephedrone, MDPV and methylone (by any route of administration). Injecting use was reported as the most common route of administration of synthetic cathinones (48 per cent) among PWID having reported lifetime use of synthetic cathinones, followed by snorting (36 per cent) and smoking (23 per cent).<sup>7</sup>

PWID who used synthetic cathinones (by any route of administration) were more likely to have initiated injecting drug use with stimulants (61 per cent vs. 40 per cent) and less likely to have initiated injecting drug use with heroin (26 per cent vs. 46 per cent), compared to PWID who did not report synthetic cathinone use. Moreover, PWID reporting lifetime use of synthetic cathinones (by any route of administration) were significantly younger than non-synthetic cathinone users (34 years vs. 45 years) and more likely to be HIV-positive than PWID who did not report synthetic cathinone use (12.9 per cent vs. 8.6 per cent). HCV was lower among PWID reporting lifetime use of synthetic cathinones than among PWID who did not report synthetic cathinone use (58.1 per cent vs. 67.8 per cent). Receptive syringe sharing in the past six months was higher among PWID reporting lifetime use of synthetic cathinones than among PWID who did not report synthetic cathinone use.<sup>8</sup>

In Canada, a recent study on crystalline methamphetamine and the initiation of injecting drug use among street-involved youth in Vancouver found that non-injecting use of crystalline methamphetamine was positively associated with subsequent injection initiation and that crystalline methamphetamine was the drug

of first injection most commonly reported, followed by heroin and cocaine (see segment 16).

## Asia

In East and South-East Asia, countries identify ATS among the most widely used drugs and increasing use of methamphetamine is reported by most countries in this sub-region. Cambodia, Malaysia and Thailand have reported injecting use of ATS. In Cambodia, methamphetamine use (by any route of administration) was reported by most PWID, according to a study conducted in 2012, and recent injecting use of methamphetamine among PWID was reported in Malaysia (see segments 3 and 4). In Thailand syringe sharing was linked to daily injecting use of methamphetamine in a study conducted among self-reported HIV-positive injecting drug users (see segment 5).

In Western Asia, limited data on the injecting use of synthetic drugs are available from the Islamic Republic of Iran. Whereas opiates are among the most commonly used illicit drugs in the Islamic Republic of Iran,<sup>9</sup> the use of methamphetamine (by any route of administration) among PWID who share syringes has been reported in recent years.<sup>10</sup> Results from a study at a methadone maintenance treatment clinic in Zahedan, in the Islamic Republic of Iran, show an increase of patients reporting methamphetamine use -by any route of administration- (from 6 per cent in 2009 to nearly 20 per cent in 2011). Even though smoking is identified to be the main route of administering methamphetamine in the Islamic Republic of Iran, there are recent reports of injecting use, including syringe sharing, thereby increasing the risk of acquiring or spreading HIV and other blood-borne viruses.<sup>11</sup>

## Europe

Recent reports of injecting NPS use, in particular synthetic cathinones, have emerged in some European countries. Injecting synthetic cathinone users are primarily people who inject other drugs (such as heroin and amphetamines), who, for various reasons, switch to injecting synthetic cathinones or add synthetic cathinones to their drug-use repertoire. There are also reports of long-term abstinent ex-opiate users in Europe who have begun to inject synthetic cathinones, as well as some limited reports of youths initiating injecting drug use with synthetic cathinones. In most European countries that have reported injecting use of synthetic cathinones (Austria, Belgium, the Czech Republic, France, Germany, Ireland, Poland, Spain and the United Kingdom) injecting use patterns are reported at relatively low-levels and in localized areas concentrated particularly among specific high-risk drug user groups (see segments 10 to 13). However,

6 Dada S., "Substance abuse & drug injection trends in South Africa." Presented at the EMCDDA 13th Annual TDI Meeting, September, 2013, South African Medical Research Council.

7 Wagner, K. et al. (2014). "Use of synthetic cathinones and cannabimimetics among injection drug users in San Diego, California." *Drug and Alcohol Dependence* 141: 99–106.

8 Ibid.

9 UNODC, *World Drug Report 2015*, New York, May 2015; *This prevalence corresponds to 2010 and includes opiates and prescription opioids.*

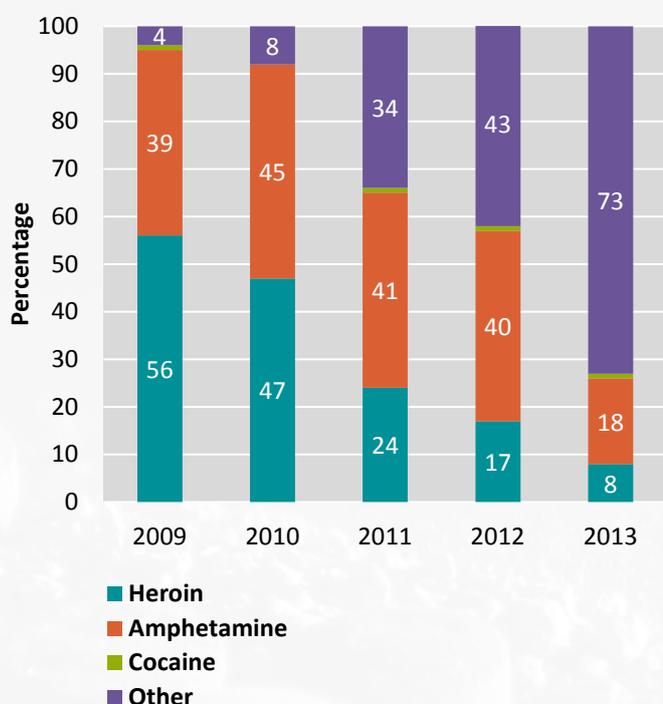
10 See segment 6.

11 Alam Mehrjerdi, Z. (2013) "Crystal in Iran: methamphetamine or heroin kerack." *DARU Journal of Pharmaceutical Sciences* 21 (1): 22.

more substantial levels of use for injecting synthetic cathinones have been identified among large cohorts of high-risk drug users in Hungary and Romania.<sup>12</sup>

For a long time, injecting use of heroin and amphetamine had been reported among PWID in Hungary, but national data on PWID attending needle syringe programmes in Hungary show that since 2010 injecting use of these drugs have begun to be replaced by injecting use of “other” drugs, including NPS. Over a 5-year period (see Figure 1), there was a significant decrease in the percentage of PWID in Hungary reporting heroin as the primary injected drug (declining from 56 per cent in 2009 to 8 per cent in 2013). In contrast, the reported injecting use of “other” substances—including NPS—increased significantly (from 4 per cent in 2009 to 73 per cent in 2013).

**Figure 1. Breakdown of PWID attending needle syringe programmes by primarily injected drug type between 2009–2013 (2013: N=3409) in Hungary**



Source: Csák, R.: *Tűcsere programok adatai, 2013. Nemzeti Drog Fókuszpont. Unpublished thesis.*

By mid-2010, needle and syringe programmes reported a sharp decrease in the number of heroin-injecting clients and an increasing use of mephedrone injecting (see segment 9). In the following years, injecting use of other synthetic cathinones became more visible. In 2011, MDPV became the main substance of “other” drugs injected by PWID, while injecting use of mephedrone and 4-MEC continued to be reported, albeit by a small percentage of clients. In 2013, the synthetic cathinone pentedrone became the predominant substance injected by clients reporting injecting use of “other” drugs, according to data collected from 3,409 PWID.

The emergence of injecting use of NPS was concomitant with a decrease in the availability of heroin and a reported “low active substance content” of amphetamines. While many reasons may have driven these changes on the market, a qualitative study conducted in 2011 revealed that these market changes correlate with changes in patterns of injecting drug use.<sup>13</sup> Mephedrone and other cathinones were reported to be injected more frequently than heroin or amphetamine, which increased the demand for syringes. Consistent with these changes in patterns of injecting drug use, high levels of health risks resulting from a heightened frequency of injecting use were also reported in Hungary. HCV infection is reported to be more prevalent among people who inject some NPS with stimulant effects, since the short duration of action from injecting use of some synthetic drugs leads to a high-frequency use pattern.<sup>14</sup> The prevalence of HCV infection among PWID in Budapest increased from 41 per cent in 2013 to 60 per cent in 2014, indicating that factors favouring the spread of injecting-related infections were present among PWID.<sup>15</sup>

In Romania, substantial levels of injecting use of synthetic cathinones have been identified among large cohorts of high-risk drug users. According to data from a needle and syringe programme in Bucharest, heroin was the primary type of drug injected among PWID (at 97 per cent) in 2009. However, in 2010 a large share of PWID (37 per cent) identified NPS as their primary type of drug injected. In 2012, injecting use of NPS among PWID (at 49 per cent) for the first time surpassed heroin injecting use (at 38 per cent). In 2013, around half of the 1,326 PWID surveyed reported injecting use of NPS (mainly synthetic cathinones), while 44 per cent reported injecting use of heroin, and 5 per cent reported injecting use of both NPS and heroin. In 2013, only 18 per cent of PWID entering drug treatment reported NPS use.

In addition to increased NPS use among PWID, Romania and Greece reported a significant increase in the number of HIV cases and in the extent of HIV infection prevalence reported among PWID in 2011. In Romania, 3-5 cases of HIV infection were reported annually among PWID between 2007 and 2009, but that number increased to 12 cases in 2010 and to 129 cases in 2011. By the end of June 2012, a total of 102 additional cases were registered in the country.<sup>16</sup> HIV prevalence among PWID increased significantly from 3 per cent in 2009 to 53 per cent in 2012. The spreading use of synthetic cathinones injecting was reported to be associated with the rise of HIV infections among

12 EMCDDA, *Perspectives on drugs, injection of synthetic cathinones, May 2015.*

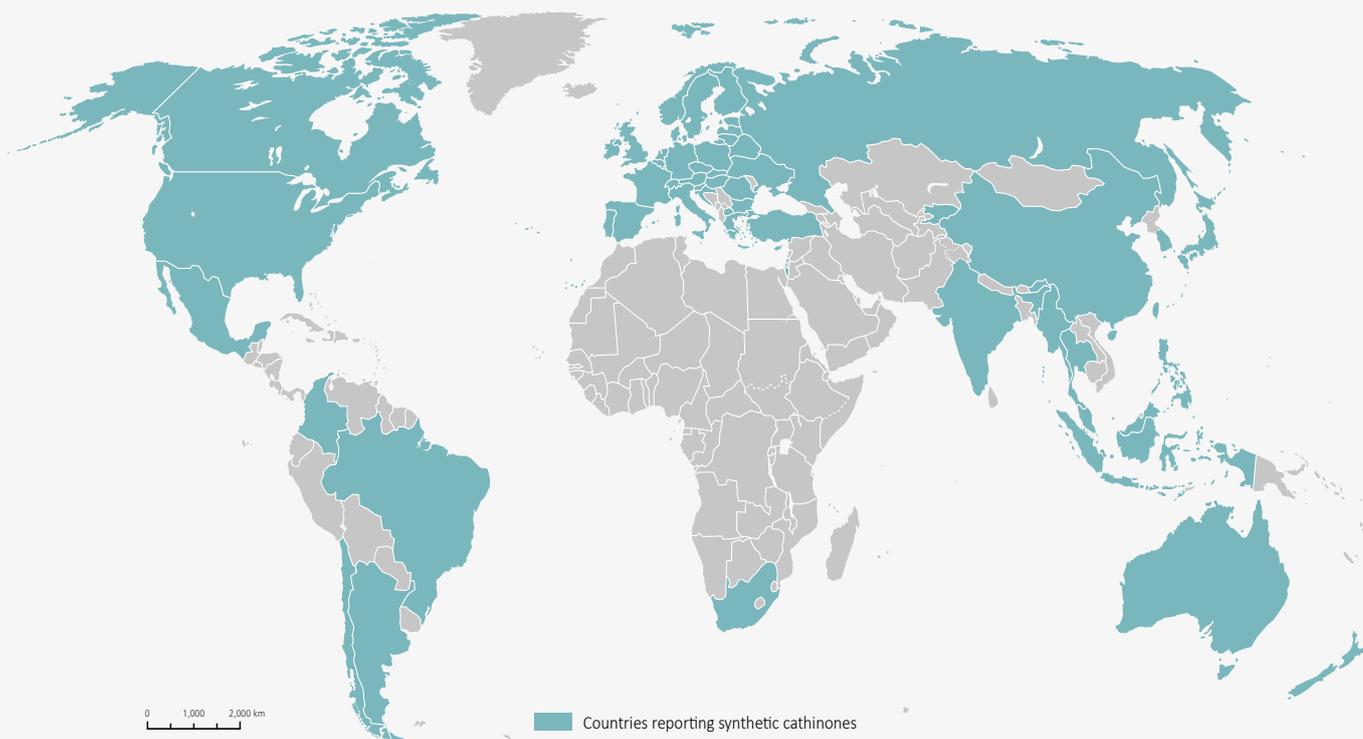
13 Péterfi A., et. al. “Changes in patterns of injecting drug use in Hungary: a shift to synthetic cathinones”. *Drug Test Anal*, 2014 Jul-Aug;6(7-8):825-31.

14 “Injecting of new psychoactive substances and related risks in Hungary.” PDU annual expert meeting, EMCDDA, Lisbon, 27 September 2013. Gergely Horvath, Hungarian National Focal Point.

15 Rácz J., et. al. New cases of HIV among PWIDs in Hungary: False alarm or early warning?. *International Journal of Drug Policy*, May 2015.

16 Botescu A et al. HIV/AIDS among injecting drug users in Romania. Report of a recent outbreak and initial response policies.

**Map 1. Countries reporting the emergence of synthetic cathinones, 2013-2015**



Source: UNODC Early Warning Advisory on New Psychoactive Substances

Note: The boundaries shown on this map do not imply official endorsement or acceptance by the United Nations. Dashed lines represent undetermined boundaries. The dotted line represents approximately the Line of Control in Jammu and Kashmir agreed upon by India and Pakistan. The final status of Jammu and Kashmir has not yet been agreed upon by the parties. The final boundary between the Sudan and South Sudan has not yet been determined.

PWID which coincided with a significant reduction of harm reduction service provision. A behavioural surveillance survey in Bucharest detected changes in injecting use patterns since 2010. High levels of injecting frequency and needle-sharing associated with stimulant use were reported among heroin users, while some reported shifting to injecting use of stimulants, mostly synthetic cathinones.

In the United Kingdom, an increase in injecting use of synthetic stimulants was recently reported.<sup>17</sup> The proportion of people surveyed in England, Wales and Northern Ireland reporting ATS as the primary drug of injection tripled from 2004 to 2014 and it is reported that around one-in-ten PWID are injecting mephedrone. PWID injecting mephedrone in the past year were found to be more likely to have reported HIV infection, antibodies to hepatitis C, and an injection site infection, than PWID who did not inject mephedrone. PWID injecting amphetamine in the past year were also more likely to have antibodies to hepatitis C, than PWID who did not inject amphetamine. The injecting use of crystalline methamphetamine and mephedrone either immediately before or during sex has also been reported among men who have sex with men (MSM) in the country (see segment 13). In Ireland, an increase in acute HIV infection cases reported among PWID in 2015 was associated with an

injecting use of the synthetic cathinone alpha-PVP.<sup>18</sup> In 2015, ethylphenidate was placed under temporary control in the United Kingdom following reports that this drug was being injected among drug users and that it had emerged on the drug market as an alternative to cocaine.

## Oceania

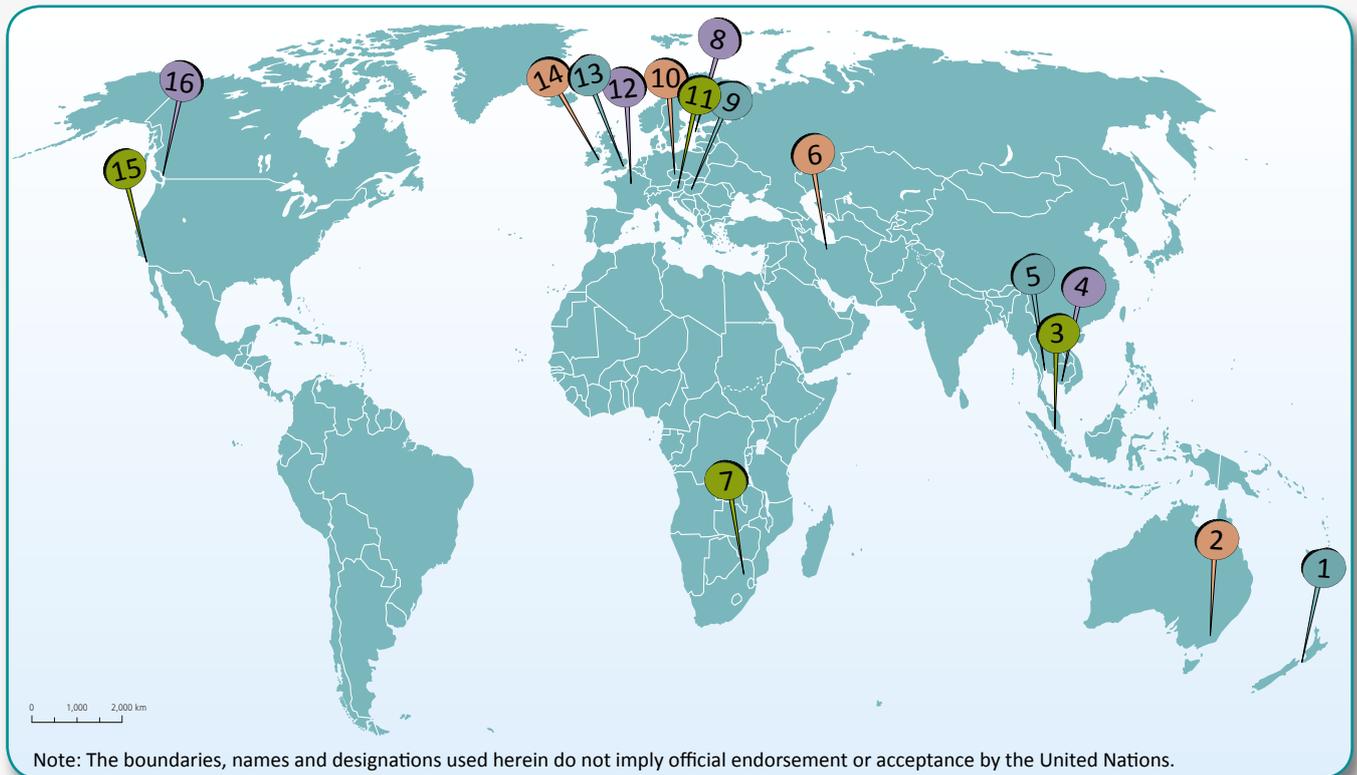
In Oceania, injecting use of methamphetamine has been reported among specific high-risk drug user groups. According to a report presented in 2015, levels of injecting use of methamphetamine in New Zealand decreased among documented police detainees from 21 per cent in 2012 to 12 per cent in 2014 (see segment 1). In Australia, the findings of the 2015 Illicit Drug Reporting System (IDRS) participant survey showed that heroin remains the main drug of choice and drug injected most often in the last month among PWID in 2015 (at 41 per cent), followed by methamphetamine (at 33 per cent), showing a similar pattern to the data collected in 2014 (see segment 2). In addition, crystalline methamphetamine use<sup>19</sup> reported among PWID in the past six months increased to 67 per cent in 2015, up from 61 per cent in 2014. Compared to 2010, only 39 per cent of PWID that year reported using crystalline methamphetamine in the past 6 months.

17 Public Health England, Health Protection Scotland, Public Health Wales, and Public Health Agency Northern Ireland. Shooting Up: Infections among people who inject drugs in the UK, 2014. London: Public Health England, November 2015. See also segment 13.

18 <https://www.unodc.org/LSS/Announcement/Details/bdd24c3b-0dca-4177-ae94-f6c26c346851>

19 Use included smoking, snorting, swallowing and injecting as routes of administration.

## Regions covered in this issue



The segments presented were selected to illustrate the thematic focus of this Global SMART Update issue. The sequence of the segments follows roughly an east-west direction from Oceania, which has among the highest prevalence rates for ATS use in the world, through East Asia with its large number of ATS users to other regions and continents. In order to maintain a balanced geographic spread, preference has been given to thematic segments that maintain geographic diversity which in some cases meant to include research studies dating back several years. Although injecting drug use features in every region of the world, more research is needed on injecting use of ATS and NPS, particularly in regions such as South America and Africa where information remains scarce. The numbered pins on the map above correspond with the index of segments below.

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## New Zealand: Decrease of methamphetamine injecting reported among prisoners

**WELLINGTON, New Zealand – July 2015.** The 2014 New Zealand Arrestee Drug Use Monitoring (NZ-ADUM) study conducted among police detainees in Whangarei, Auckland Central, Wellington Central and Christchurch Central, found that 12 per cent of 835 detainees who had used methamphetamine in the past 12 months reported injecting it. This signifies an overall decrease from 2012 when 21 per cent of 802 detainees reported injecting use of methamphetamine. However, with regard to general methamphetamine use, the share of detainees who self-reported dependence on methamphetamine increased from 22 per cent in 2011 to 37 per cent in 2014. Moreover, there was an increase in the mean number of days that detainees had used methamphetamine in 2014 (102 days) compared to previous years (68 days in 2010).

Wilkins, C. et al. (2015) *New Zealand Arrestee Drug Use Monitoring (NZ-ADUM)*. SHORE & Whariki Research Centre: Auckland.



Source: Ioulia Kondratovitch

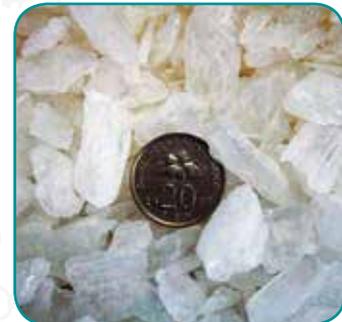
## Australia: Illicit Drug Monitoring System reports increasing methamphetamine use among PWID

**CANBERRA, Australia – 2015.** According to the national 2015 Illicit Drug Reporting System (IDRS) in Australia, 72 per cent of PWID reported methamphetamine use in the past 6 months, which included smoking, snorting, swallowing and injecting as routes of administration, compared to 70 per cent in 2014 and 66 per cent in 2013. More specifically, in 2015, 67 per cent of PWID were found to have used crystalline methamphetamine in the past 6 months which marks a 6 per cent increase from the previous year. In 2015, methamphetamine was reported as the second most injected drug among PWID in the last month (at 34 per cent), with heroin being the most injected drug (at 41 per cent).

Stafford, J. and Burns, L. (2015) *Australian Drug Trends 2015: Findings from the Illicit Drug Reporting System (IDRS)*. Australian Drug Trends Conference, Sydney. National Drug and Alcohol Research Centre, University of New South Wales.

## Malaysia: Alcohol and methamphetamine use associated with overdose among PWID

**KUALA LUMPUR, Malaysia – July 2015.** A study conducted among 460 PWID in Klang Valley in Malaysia in 2010 found that alcohol and methamphetamine use were associated with overdose. In the prior 6 months, 42.9 per cent of PWID had used methamphetamine which was associated with increased odds of overdose compared to no methamphetamine use. Methamphetamine was primarily administered among PWID by smoking, while in the past 6 months 4.5 per cent reported to have injected methamphetamine. Moreover, PWID reported the use of a variety of drugs, often in combination.



Source: Malaysian Drug Control Authority

Bazazi, A. R. et al. (2015) "High prevalence of non-fatal overdose among people who inject drugs in Malaysia: Correlates of overdose and implications for overdose prevention from a cross-sectional study." *International Journal of Drug Policy* 26 (7).

## Cambodia: Methamphetamine is the most used substance among PWID

**PHNOM PENH, Cambodia – March 2014.** Conducted in Cambodia in 2012, a national drug use study found that 78 per cent of PWID in the past year had used methamphetamine, in either crystalline or non-crystalline form, while 61.9 per cent used heroin. With regards to the frequency of use in the past month, 37.3 per cent of PWID reported to have used methamphetamine (crystalline or non-crystalline) three times or more, followed by 36.4 per cent that reported to have used the substance two times per week or less. Among drug users in general, 81 per cent reported to have used methamphetamine, in crystalline or non-crystalline form, in the past year.

*National Population Size Estimation, HIV Related Risk Behaviors and HIV Prevalence among People Who Use Drugs in Cambodia in 2012.* Kingdom of Cambodia.



Source: UNODC

## Thailand: Syringe sharing associated with daily methamphetamine and midazolam injecting

**BANGKOK, Thailand – June 2015.** Between June 2009 and October 2011, a study conducted among 650 self-reported HIV-positive injecting drug users in Bangkok showed that daily methamphetamine and midazolam injecting, polydrug use, injecting polydrug use and not receiving antiretroviral therapy was associated with syringe sharing. Overall, 16.5 per cent of participants reported that they had lent a used syringe to another person in the past 6 months.

Voon, P. et al. (2015) "High prevalence of syringe lending among HIV-positive people who inject drugs in Bangkok, Thailand." *Harm Reduction Journal* 12: 16.

5

## Islamic Republic of Iran: Possible association between blood-borne infectious diseases and methamphetamine injecting?

**TEHRAN, Islamic Republic of Iran – February 2013.** An analysis of published scientific literature in 2013 found that the high prevalence of blood-borne infectious diseases among PWID in the Islamic Republic of Iran and anecdotal information of methamphetamine injecting among drug users in the country, calls for more research. Concerning injecting use in general, a study conducted among 899 PWID in Tehran between June 2006 and March 2007 found that 50.7 per cent of participants reported current or past HBV infection, 34.5 per cent reported HCV infection and 10.7 per cent reported HIV prevalence.

Alam Mehrjerdi, Z. and Noroozi, A. (2013) "An emerging trend of methamphetamine injection in Iran: a critical target for research on blood-borne infection diseases." *Hepatitis monthly* 13 (2): 8154.

Rahimi-Movaghar, A. et al. (2010) "HIV, hepatitis C virus, and hepatitis B virus co-infections among injecting drug users in Tehran, Iran." *International Journal of Infectious Diseases* 14 (1): e28-e33.

6

## South Africa: South African Community Epidemiology Network on Drug Use reports injecting use of heroin, cocaine, methcathinone, methamphetamine and prescription medicines

**PRETORIA, South Africa – February 2014.** Conducted between January and June 2013, a national study of patients at specialist substance abuse treatment centres in South Africa that comprise the South African Community Epidemiology Network on Drug Use, found that while an increasing number of patients report injecting heroin use, patients also report injecting use of cocaine, methcathinone, methamphetamine and prescription medicines.

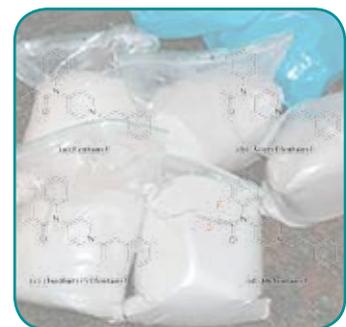
South African Community Epidemiology Network on Drug Use (SACENDU) (2014) *Monitoring Alcohol and Drug Abuse Treatment Admissions in South Africa*. Phase 34.

7

## Estonia: Fentanyl and amphetamine are the main substances of use among PWID

**TALLINN, Estonia – January 2010.** In a study conducted among 350 PWID in Tallinn in 2005, 77 per cent of participants reported fentanyl as their main drug of use followed by amphetamine at 23 per cent. While HIV prevalence was reported by 62 per cent of people injecting fentanyl, HIV prevalence was reported by 27 per cent of people injecting amphetamine.

Talu, A. (2010) "HIV infection and risk behaviour of primary fentanyl and amphetamine injectors in Tallinn, Estonia: Implications for intervention." *International Journal of Drug Policy* 21 (1): 56-63.



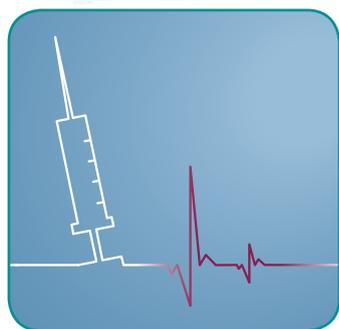
Source: UNODC

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## Hungary: Injecting mephedrone use is associated with changes in use patterns

**BUDAPEST, Hungary – 2015.** A drug use study conducted by the Blue Point Drug Counselling and Outpatient Centre between December 2010 and February 2011 among 17 injecting mephedrone users in the Inner Józsefváros Budapest, found that participants started to inject mephedrone shortly after the substance appeared on the market in the second half of 2010. Participants reported to have begun injecting mephedrone because of an especially strong sense of euphoria in the early stages after injection and because the stimulating effect of mephedrone among former heroin injecting users enabled them to take part in collective injecting use, instead of earlier, individual injecting use. According to this study, collective injecting use played an instrumental role in the rapid spread of mephedrone.

Rácz, J., Csák, R. and Lisznyai, S. (2015) "Transition from "old" injected drugs to mephedrone in an urban micro segregate in Budapest, Hungary: a qualitative analysis." *Journal of Substance Use* 20 (3): 178-186.



Source: UNODC

## Czech Republic: High levels of injecting drug use and methamphetamine use reported among people receiving drug treatment in Prague

**PRAGUE, Czech Republic – September 2014.** According to the 2013 National Report of the Czech Republic to the EMCDDA, a study conducted by the National Focal Point in association with a marketing and social research agency in November 2013, found that among 240 patients of low-threshold programmes in Prague, 96.7 per cent of patients reported injecting drug use in the past year, while 82.5 per cent reported methamphetamine use in any form. Also, 2.1 per cent of patients used NPS brands called "Funky" and "El Magico" whereas another 2.1 per cent used other new synthetic drugs.

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## Austria: Injecting use and nasal insufflation are the main modes of mephedrone use

**GRAZ, Austria – October 2012.** Based on the 2012 National Report of Austria to the EMCDDA, a study conducted in Graz between October 2010 and April 2011 among 27 mephedrone users found that around one in three users reported injecting as the only mode of using mephedrone, while one in five reported nasal insufflation ('snorting') as the only mode of use and one person reported oral ingestion as the only mode of mephedrone use. The remaining participants reported combined modes of mephedrone use. A total of 59 per cent of mephedrone users reported either injecting use or injecting use in combination with other modes of use and 64 per cent reported mephedrone use by nasal insufflation or in combination with other modes of use.



Source: EMCDDA

## France: Heroin, cocaine, buprenorphine and 4-methylethylcathinone detected in used syringes in Paris

**PARIS, France – April 2015.** An analysis of the residual content of 3,489 used syringes collected at 17 sites in Paris and the surrounding suburbs in 2012 found that the synthetic cathinone, 4-methylethylcathinone (4-MEC) was detected in 23 per cent of the cases, after heroin at 42 per cent, cocaine at 41 per cent and buprenorphine at 29 per cent. Over the course of 2012, 4-MEC was detected in an increasing number of syringes between the summer and the winter months pointing to an increased use of the substance at a time when cocaine consumption decreased.

Néfau, T. et al. (2015) "Drug analysis of residual content of used syringes: a new approach for improving knowledge of injected drugs and drug user practices." *International Journal of Drug Policy* 26 (4): 412-419.

## United Kingdom: Mephedrone and crystalline methamphetamine are injected at “chemsex” parties

**LONDON, United Kingdom – December 2015.** In a study based on in-depth interviews with 30 men who have sex with men (MSM) living in three South London boroughs who had used either crystalline methamphetamine, mephedrone or GHB/GBL either immediately before or during sex with another man in the past year, it was found that nasal insufflation was the preferred mode of mephedrone and crystalline methamphetamine use, but that one-third of participants had also injected either one of these substances in the past year. Commonly referred to as “slamming”, participants reported careful injecting use with clean needles and none of the participants reported the sharing of needles between sexual partners at “chemsex” parties.

Bourne, A. et al. (2015) ““Chemsex” and harm reduction need among gay men in South London.” *International Journal of Drug Policy* 26 (12): 1171-6.



Source: Community access national network

## Ireland: An unexpected increase in acute HIV infection cases among PWID linked to a rise in injecting alpha-PVP use

**DUBLIN, Ireland – October 2015.** In February 2015, the Department of Public Health (DPH), Health Service Executive (HSE) in Dublin found that an unexpected increase in the number of acute HIV infection cases among people who inject drugs (PWID) might have been linked to an increase in injecting use of the synthetic cathinone, alpha-PVP, among the homeless population.

Giese, C., et al. (2015) “Injection of new psychoactive substance snow blow associated with recently acquired HIV infections among homeless people who inject drugs in Dublin, Ireland, 2015” *Eurosurveillance* 20 (40): 1-6.

## United States: Health risks differ between injecting heroin users and methamphetamine users with multiple modes of administration

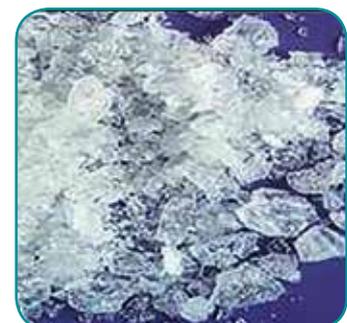
**SAN DIEGO, United States – January 2015.** A study conducted among 511 PWID in San Diego, California, between June 2012 and September 2013, identified two distinct classes of injecting drug use: primarily users injecting methamphetamine with multiple modes of administration (including nasal insufflation and oral ingestion) and primarily heroin injecting users. While injecting heroin use was more likely associated with being hepatitis C virus (HCV) seropositive, methamphetamine use through multiple modes of administration was more likely associated with being HIV seropositive and being diagnosed with sexually transmitted infections (STI). On the whole, injecting heroin users were found to be more likely to report lifetime cases of overdose as opposed to methamphetamine injecting users.

Roth, A. M. et al. (2015) “Patterns of Drug Use, Risky Behavior, and Health Status Among Persons Who Inject Drugs Living in San Diego, California: A Latent Class Analysis.” *Substance Use and Misuse* 50 (2): 205-214.

## Canada: Crystalline methamphetamine is the most commonly used drug of first injection

**VANCOUVER, Canada – December 2013.** A study conducted between October 2005 and November 2010 among 395 street-involved youth who inject drugs, aged 14 to 26 in Vancouver found that crystalline methamphetamine was the most commonly injected drug at the time of first injection reported by 45 per cent of participants, followed by heroin at 29 per cent and cocaine at 10 per cent.

Werb, D. et al. (2013) “Crystal methamphetamine and initiation of injection drug use among street-involved youth in a Canadian setting.” *Canadian Medical Association Journal* 185(18): 1569–1575.



Source: Canadian Border Services Agency (CBSA)

## Global SMART accomplishments for 2015

Since 2008, the Global SMART (Synthetics Monitoring: Analyses, Reporting and Trends) Programme has been working towards improving the capacity of targeted Member States to generate, manage, analyse, report and use information on illicit synthetic drugs. In 2015 the Global SMART Programme:

### Published and launched

- The *Global SMART Update Volume 13 and 14* (in English and Spanish);
- The *Early Warning Advisory newsletter Volume 3, 4, 5 and 6*;
- The Conference Room Paper covering the UNODC-WHO Expert Consultation on NPS (distributed during the Commission on Narcotic Drugs March 2015);
- *The Challenge of Synthetic Drugs in East and South-East Asia and Oceania: Trends and Patterns of Amphetamine-type Stimulants and New Psychoactive Substances, 2015*;
- The CICAD report “*Drug use in the Americas*” chapters six and seven on Amphetamine-type Stimulants and New Psychoactive Substances and other emerging drugs in the region, 2015;
- Updated version of the *New Psychoactive Substance leaflet/poster* (in Arabic, English and Spanish).

### Organised

- Co-organised the Regional Conference on Synthetic Drugs and NPS in the United Arab Emirates (February 2015);
- Co-organised the side event “Meeting the challenges of NPS” with the United Kingdom during the 58th session of the Commission on Narcotic Drugs and the SMART Advisory Group Meeting in Vienna, Austria (March 2015);
- Co-organised the UNODC and INCB International conference on “Precursor chemicals and New Psychoactive Substances in Bangkok, Thailand (April 2015);
- Co-organised with OSCE the regional workshop “New Trends and Identification Techniques in Detection of the NPS and Co-operation among Law Enforcement Agencies in South Eastern Europe” in Sarajevo, Bosnia-Herzegovina (July 2015);
- Organized the annual regional Workshop for Asia and the Pacific in Beijing, China (September 2015);
- Organised a regional forensic training workshop on drugs and precursors for West Africa in Accra, Ghana (September/October 2015).

### Contributed to

- The 2015 World Drug Report;
- The 57<sup>th</sup> and 58<sup>th</sup> regular session of the Inter-American Drug Abuse Control Commission (CICAD);
- The Exhibition: 60 Years of Laboratory Science in international Drug Control in Vienna, Austria;
- The workshop on NPS for Law Enforcement Officers in South Asia, in New Delhi, India (August 2015);
- The dissemination of information related to the synthetic drug situation at relevant conferences and events since August 2015, such as the ASEAN Senior Official Meeting on Drugs in Singapore (August 2015); the 11th International Training Course on Precursor Chemical Control for Asian Narcotics Law Enforcement Officers in Thailand and the 24th ADLOMIC Meeting in the Republic of Korea (September 2015); the Ketamine Symposium and the Illicit Drug Working Group discussion at the Asian Forensic Sciences Network Annual Symposium in China, the Australian Federal Police Senior Liaison Officer Conference in Thailand, the 7th Asian Forensic Sciences Network in Malaysia, the WHO Expert Committee Meeting on Drug Dependence in Switzerland, the 39th Meeting of the Heads of National Drug Law Enforcement Agencies for Asia and the Pacific in Thailand (November 2015); the G7+ NPS meeting in Austria, the 5th WHO Informal Member States briefing on the world drug problem and public health in Switzerland, and the NPS trends and Drug profiling workshops for the United Arab Emirates (December 2015).

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The Global SMART Programme is managed by the Laboratory and Scientific Section of the Research and Trend Analysis Branch. UNODC reiterates its appreciation and gratitude to Member States and partner agencies for the data and information that provided the basis of this report.

If you have comments on this report, or would like to contribute information that should be considered for future reports, please contact the Global SMART Programme at [globalsmart@unodc.org](mailto:globalsmart@unodc.org). Information on the Global SMART Programme can be found via the internet at [www.unodc.org](http://www.unodc.org) and [www.apaic.org](http://www.apaic.org) or by contacting UNODC at the Vienna International Centre, P.O. Box 500, A-1400, Vienna, Austria.