

The Emperor's New Clothes?

Findings from the NPSinEurope.eu Rapid Assessment and Response Study of Consumption of New Psychoactive Substances among People Who Use Drugs Heavily in Five EU Member States



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BACKGROUND: The EC-DPIP NPSinEurope.eu project contributes to innovative and effective health promotion interventions targeting the emerging use of New Psychoactive Substances (NPS) among people who use drugs heavily (PUDH). In five countries, we conducted a rapid assessment and response (RAR) study of NPS use, aimed at informing these emerging interventions. **AIMS:** To identify and document the emergent use of NPS among PUDH in five EU member states and map the developing response in these countries. **METHODS:** Desk review of the national NPS situation, an Internet Snapshot of NPS availability in offline and online drug markets, and focus groups with key stakeholders. **RESULTS:** Smart shops boosted the popularity of NPS, but after legislative action most were closed or severely restricted their assortment. A variety of NPS are available via websites and traditional

drug-dealing structures. The injecting of mephedrone, MDPV, or other synthetic stimulants among PUDH is reported in the Czech Republic, Poland, and Romania, to varying degrees. In Portugal and Greece, NPS are less prevalent among PUDH. Greek PUDH have turned to smoking methamphetamine. **CONCLUSIONS:** Synthetic stimulants are increasingly diffusing into PUDH populations. Emerging drug trends are increasingly unpredictable, subject to (offline/online) availability, legal status/action, local preferences, access to traditional substances and a range of environmental variables.

KEY WORDS: NEW PSYCHOACTIVE SUBSTANCES (NPS) – PEOPLE WHO USE DRUGS HEAVILY (PUDH) – RAPID ASSESSMENT AND RESPONSE (RAR) – HARM REDUCTION – INTERVENTION PLANNING – DRUG POLICY

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● 1 INTRODUCTION

New Psychoactive Substances (NPS) are becoming a major challenge to public health and drug policies in Europe and have become a high priority in Europe (EMCDDA, 2013, 2014, 2015). We report the outcomes of a “Rapid Assessment and Response” (RAR) among people who use drugs heavily (PUDH) of NPS use and the associated risks and harms in five selected countries – the Czech Republic, Greece, Poland, Portugal, and Romania.

UNODC defines NPS as “Substances of abuse, either in a pure form or a preparation, that are not controlled by the 1961 Single Convention on Narcotic Drugs or the 1971 Convention on Psychotropic Substances, but which may pose a public health threat” (United Nations Office on Drugs and Crime, 2013). This definition bases ‘NPS Status’ solely on the legal status of the substance, while very different substances are classified as NPS, with chemical structures and/or effects often similar to controlled substances. The actual scheduling of psychoactive substances varies by country and changes regularly. Thus, the boundaries of NPS are rather ambiguous. Furthermore, elsewhere UNODC equates NPS with a linked concept, that of new or emerging drug trends (United Nations Office on Drugs and Crime, 2014). But where NPS in most cases qualify as a new drug trend, the reverse relationship is not necessarily true, as new drug trends may well include substances which in some countries are completely new, but well-known in others (cf. home-made methamphetamine in Greece and the Czech Republic). In developing appropriate harm reduction interventions, the actual scheduling status – NPS or controlled substance – is less relevant than understanding the actual substance that may newly emerge and the specifics of the community involved. Therefore, in this paper the focus is on ‘new drug trends’, which includes the emergent availability and use of substances *new to a community*, country, or culture, regardless of their legal status.

Harmful patterns of NPS use are observed throughout Europe in both traditional and new drug-using populations (see e.g. Janikova et al., this volume). Traditional epidemiological labels, such as ‘injecting drug user’ or, more generally, ‘problem drug user’, do not always accurately describe harmful drug consumption patterns. The populations affected may not necessarily identify with or may even object to such internal, or dispositional, attributions of their drug consumption (Davies, 2013), which are furthermore fraught with moral connotations and instrumental in the stigmatisation of people who use drugs (Ahern, Stuber, & Galea, 2007; Rehm et al., 2013; Stallwitz & Shewan, 2004; van Boekel, Brouwers, van Weeghel, & Garretsen, 2013). Although the EMCDDA recently changed its definition of ‘problem drug use’ (EMCDDA, 2009; in Stallwitz, 2012) to ‘high-risk drug use’ (Thanki & Vicente, 2013), the resulting

label of ‘high-risk drug user’ continues to equate (high-risk) behaviour with personal traits and is equally prone to negative moral connotations and stigmatisation as a problem drug user (Stallwitz, 2012; Ahern, Stuber, & Galea, 2007; White, 2009). In this paper, we therefore speak of *people using drugs habitually or heavily*, a term that neutrally describes people’s drug use behaviours rather than defining the whole person and reflects the diversity of the issues and populations targeted in this study.

In this paper we focus on some of the similarities and differences in emerging drugs among PUDH and the developing response in the five participating countries. As noted, these may include both unscheduled and scheduled substances. The individual country data is reported in Vavrincikova et al. (2016).

● 2 METHODOLOGY

Five member states that reported heavy NPS consumption were included in the RAR – the Czech Republic, Poland, Romania, Greece, and Portugal. The study countries and implementing partners for the NPSinEurope.eu project were selected from among interested candidates on the basis of (i) epidemiological considerations and available information on new trends in heavy drug consumption in the EU and (ii) the candidate partners’ capacity and track record in both conducting (RAR) research tasks and implementing pilot interventions. Our aim was to capture the various recent shifts in heavy drug use witnessed in the EU, in traditional settings of heavy drug consumption and in emerging drug use risk environments. The first three countries have noted strong increases in the availability and consumption of NPS, in particular of synthetic cathinones, among traditional PUDH populations and in new generations of vulnerable young people, while in Greece the ‘controlled’ synthetic stimulant methamphetamine – home-made and rebranded *Sisha* (Glass) – has replaced heroin among PUDH in Athens. In Portugal, the use of NPS has not been reported among populations traditionally involved in heroin and/or cocaine or in opioid substitution treatment and seems largely limited to nightlife participants and festival visitors. Although drug use tends to be of an overall more controlled and episodic nature in these leisure environments, heavy use is nonetheless not absent (Duff, 2005; Parker, Aldridge, & Measham, 1998; Parker, 2009) and ‘slipping’ from recreational to problem drug use is reportedly growing (Parker, 2009).

The choice of an RAR methodology (Rhodes, Stimson, Fitch, Ball, & Renton, 1999; Stimson et al., 2006) boils down to the need for rapid results, in order to narrow the gap between the fast-paced NPS phenomenon and the development of interventions. The local RAR studies consisted of three parts: (i) a desk review of the national NPS situation; (ii) an assessment of NPS availability in offline and online

drug markets, and (iii) focus groups with drug-using and professional stakeholders in NPS.

Each partner organisation conducted a desk review of published and unpublished information pertaining to the key RAR questions on NPS consumption, consulting relevant national and EU sources of information. The offline availability of NPS was determined by a literature review and the inspection of data from early warning systems, drug testing programmes (where available), and law enforcement or other relevant data sources, as well as in the separate focus group discussions. Online availability was assessed using the EMCDDA Internet Snapshot Methodology, a rapid assessment of the availability of psychoactive substances online, conducted within a limited time frame (EMCDDA, 2011).

In each country focus groups were organised with (i) knowledgeable professionals and (ii) with PUDH involved in NPS consumption in two different cities/regions with evident NPS use. In total, 19 focus groups were conducted, with an approximately even representation of professionals and people using drugs in each group. In total, there were more than 110 predominantly male participants. The focus group participants were recruited by the partner organisations, using the criteria for participation in the RAR guidelines developed by the Department of Addictology at Charles University. PUDH were involved in all countries, except Portugal, where NPS use has barely been reported among PUDH in contact with harm reduction services and nightlife participants were enrolled in the focus groups. These participants may or may not consume drugs heavily, but this was not an inclusion criterion. The PUDH participants were 18 or older, active drug consumers, and with experience with NPS, and were recruited at different drug services, harm reduction programmes in particular. Over half of these participants had used NPS at least three times in the past 30 days before the focus group. Participants in residential drug treatment were excluded from participation. Balance in gender was taken into consideration. The professionals were 18 or older, involved in NPS service provision (harm reduction, prevention, outreach, medical services, or drug treatment) or in law enforcement or drug policy making (public health; law enforcement; national, regional, and municipal authorities). The focus groups took place in eight different municipalities: Prague and Pilsen in the Czech Republic, Athens in Greece, Krakow and Warsaw in Poland, Porto and Lisbon in Portugal, and Bucharest in Romania. The focus groups were led by a moderator and a chairperson; notes were taken by another team member. The focus group discussions were recorded and electronically transcribed. The oral informed consent of all participants was recorded before the actual focus group commenced. Each focus group ran for two hours on average.

Stepwise content analysis of the five-country RAR data allows the national situation, cultural interpretations, and meanings of NPS use across user populations and national borders to be described. The findings of these three sub-studies were first compiled in national reports using the grids and data forms provided by the project. In the second step, these national RAR reports and the corresponding materials were entered into a largely qualitative content analysis across the five sites in a search for similarities and differences and consensus and dissent between the countries. The analysis aimed to describe the various viewpoints and the needs of the affected communities and other stakeholders that need to be addressed in policy and service development. Where it was useful and feasible, the data was quantified using a “quasi-statistics” approach (Maxwell, 2010; Becker, 1958). Each data source – the literature reviews, the data on the offline and online availability of NPS, and the focus group data – was first analysed separately. Subsequent triangulation of the various sources aimed at finding “consensus and dissent” between the various data sources and across sites and allowed for a more comprehensive understanding of the findings and a firmer assessment of their validity.

● 3 FINDINGS

Overall, few studies in the five countries that were investigated focus specifically on NPS consumption among PUDH. Most of the literature that was reviewed focused on the most popular substances and those most used in the general population. Likewise, NPS brand names and chemical compounds in branded products are not always clearly defined in the literature that was investigated. The mixtures in various blends and branded products may vary according to the vendor, over time, and in terms of geography. Branded products may contain different chemicals and compounds may be sold under different brand names in different sales channels and countries. This may complicate comparisons between different studies and countries or over time.

● 3 / 1 Availability of NPS in the participating countries

NPS are available from a variety of sources. Smart shops boosted both the availability and popularity of NPS, but following legislative action most were closed or severely restricted their assortment. This resulted in a significant decrease in the overall availability of NPS to consumers in general, but has probably contributed to their diffusion into more familiar drug distribution structures, such as friendship networks and street drug markets catering to PUDH.

NPS availability increased sharply with the introduction of brick-and-mortar outlets in the Czech Republic (2009), Poland (2009), Portugal (2007), and Romania

(2009). At the peak of this phenomenon, shortly before they were closed, there were 41 physical outlets in the Czech Republic (2011), 158 in Romania (2011), and over 50 in Portugal (2012). In all four countries the overall availability of NPS declined rapidly after the closure of the brick-and-mortar shops. “*Since the smart shops have closed, I have never heard about these drugs again*” (focus group respondent, Portugal). Using existing sanitary legislation, over 1300 shops were closed in Poland in 2010, but – as they are not counted – an unknown number continues to sell various NPS (Malczewski, Krajowe Biuro Do Spraw Przeciwdziałania Narkomanii, personal communication, March 2016). In Greece, NPS emerged in 2010 but gained only minor attention as both the media and political attention were preoccupied with the rising use of “Sisha” (a crude, home-made methamphetamine product that is smoked) among PUDH in that same period. First noticed in 2012, there are reportedly less than 10 brick-and-mortar NPS shops, primarily in northern Greece, while several proprietors have been charged with selling controlled substances in ongoing court cases.

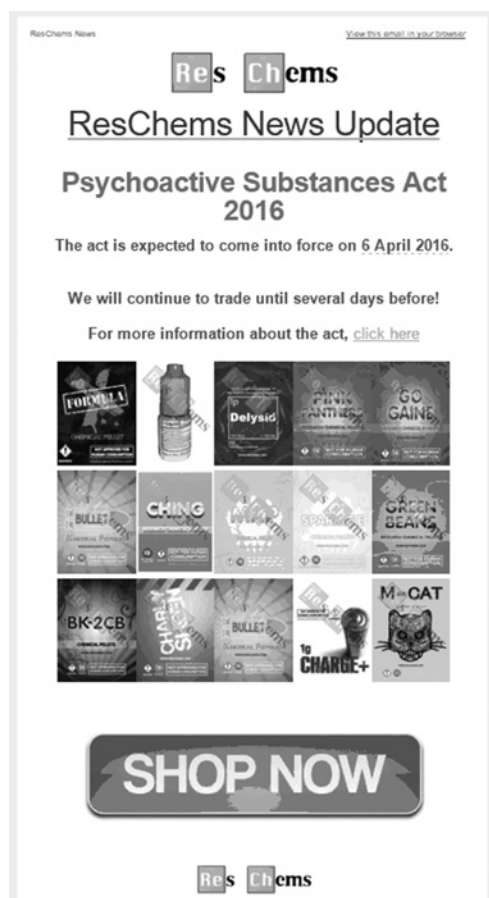


Figure 1 / Obrázek 1

Stock Clearance in Anticipation of UK Legal Changes on April 6, 2016
Výprodej zásob v reakci na očekávané legislativní změny ve Velké Británii k 6. 4. 2016

Although the closure of physical outlets resulted in important reductions in (novice) NPS consumption, websites targeting the countries being studied mail NPS to anybody with a credit card or online banking. A variety of NPS are available via websites; synthetic stimulants prevail. Interestingly, while ‘international’ web shops mostly have fixed (and comparable) prices, which may be displayed in different currencies, on country-specific sites NPS unit prices may vary considerably. For example, a gram of ethylphenidate costs €8–9 in Poland and €19–21 in Portugal.

The variety of NPS brand names (*Figures 1 and 2*) is enormous and it is very difficult to identify any consistent relationship between brand names and the chemicals these represent, both between and, as the desk review noted, within countries. The chemical names of the compounds on sale are often incomprehensible to the average consumer and sometimes it is impossible to match the brand name with a chemical compound.

After (most) physical NPS shops were formally closed in the Czech Republic, Poland, Portugal, and Romania following legislative action (from 2011 to 2013), offline sales increasingly moved into black markets and the “shadow economy”, such as sex shops, casinos, or bodybuilding shops, which may be due to the unclear legal status of NPS. These outlets offer synthetic cathinones, phenethylamines, synthetic cannabinoids, and various other substances. Synthetic cathinones and phenethylamines were relatively often encountered online in the Czech Republic, Poland, and Portugal. Synthetic cannabinoids were frequently available online in Portugal and Romania. Importantly, once bought in bulk online, NPS, particularly synthetic stimulants, are increasingly retailed through friendship networks and traditional drug-dealing structures and PUDH markets. In these traditional markets, NPS are increasingly used to cut scheduled substances, such as methamphetamine in the Czech Republic. The RAR suggests that in Romania, Poland, and the Czech Republic the diffusion of NPS into vulnerable populations may have been facilitated by changes



Figure 2 / Obrázek 2

RAR cloud of NPS types, brand names, and prevalence figures
Typy NPL, obchodní názvy a prevalenční hodnoty (cloudové znázornění na základě dat z analýzy RAR)

in the legal status of NPS. Shortly before NPS were scheduled, many web shops started selling off their remaining stock at drastically reduced (wholesale) prices.

Two relatively new drug trends studied in the RAR evolved around substances that do not conform to the definition of NPS (EMCDDA, 2013, 2014, 2015; United Nations Office on Drugs and Crime, 2014; UNODC, 2013) as these concern scheduled drugs, the use of Sisha in Greece and of diverted pharmaceutical opioids in rural areas of the Czech Republic. The Czech data suggests the existence of a sizable 'grey' market in diverted pharmaceutical opioid painkillers, such as Fentanyl and extended-release morphine. As we discuss below, both of these new drug trends among PUDH may well be fostered by a similar set of drivers.

● 3 / 2 Extent and nature of NPS use among PUDH

The use of NPS is considerably higher among PUDH than in the general population in the Czech Republic, Poland, and Romania. In both Portugal and Greece, NPS have reportedly not made significant inroads into PUDH populations or raised concern among drug service providers. *Figure 2* provides an impression of NPS consumption in the RAR countries and the branded products detected by the local RAR teams and suggests that synthetic cathinones are of particular concern in their countries.

The use of NPS among PUDH primarily concerns the injecting of synthetic cathinones and varies widely between the countries, from (nearly) absent in Portugal, to almost one and two thirds in cities in, respectively, the Czech Republic and Romania, to unmeasured, but clearly present, in Poland. The injecting of mephedrone, MDPV, or other synthetic stimulants among PUDH is reported in the Czech Republic, Poland, and Romania, but to varying degrees. In Portugal and Greece, NPS are of less concern, both among PUDH and in the nightlife setting. In Portugal, this is associated with the decriminalisation and easy availability of traditional drugs, such as heroin, cocaine, or ecstasy. But in Greece, many PUDH have switched from heroin to Sisha since 2010–2011, as economic austerity measures hit the poor in particular and heroin ceased to be affordable. A recent regional trend in the Czech Republic concerns the injecting of diverted opioid pain killers (fentanyl & Vendal-Retard® (extended-release morphine) in western and southern Bohemia. In 2014 5.1% of Czech people who inject drugs (PWID) had injected pharmaceutical opioids (23.6% in the Pilsen region).

The closure of brick-and-mortar stores in the Czech Republic, Poland, and Romania has reportedly resulted in decreases in NPS consumption in the general population and among PUDH, although in all three countries the injecting of synthetic stimulants continues to be an important concern. Lack of access to electronic payment options is

perhaps still limiting personal purchase online, but NPS are increasingly obtained through traditional drug trafficking structures and are also mixed into and sold as traditional drugs.

3 / 2 / 1 Patterns of use

In the Czech Republic, Romania and Poland, synthetic stimulants are primarily injected among PUDH with long histories of injecting heroin or (meth)amphetamine. Those without such histories reportedly mostly snort, smoke, or swallow a wide variety of NPS. For younger consumers in particular, NPS presented a more or less typical pathway into escalating drug use and, finally, injecting. *"I didn't use heroin before legal highs. When they first appeared on the market, I smoked them (synthetic cannabinoids), then I was sniffing powdered drugs and then, because the effects diminished, I started injecting"* (focus group respondent, Romania). In Poland and Romania the majority of people who inject NPS were previously involved primarily in heroin use (including people currently in OST), as are many of the Sisha consumers in Greece. In the Czech Republic, synthetic stimulants are mostly injected as substitutes for or in addition to methamphetamine.

Many Greek PUDH have replaced heroin with Sisha, which is smoked ($\pm 80\%$) or injected (20%). In the other countries synthetic stimulants are used in addition to traditional injectable drugs. The PUDH in the focus groups also reported combined use of the two drugs. This pattern may grow as Greece recovers from the economic crisis and heroin comes within the financial reach of consumers again. Indeed, where available, heroin is often used to take the edge off excessive synthetic stimulant use: *"You can inject 40 times and you don't get out of a state of panic. You can only ease your feelings if you shoot heroin"* (focus group respondent, Romania).

3 / 2 / 2 Factors in choosing NPS

Figure 3 summarises the positive features PUDH associate with NPS. Overall, low price and easy availability have contributed to the emergence and spread of NPS among PUDH, in particular when sold in brick-and-mortar stores. But, beyond these attractions and curiosity, the legal status of NPS and preventing sanctions when in treatment seem equally important incentives for (continued) NPS use by PUDH. In particular, avoiding heavily policed drug markets is viewed as an important benefit. Legal status seems less of a factor when NPS are bought through black market structures. People in OST reported that NPS were not detected by the drug assays commonly used in programmes. *"Since I've been on methadone (treatment) I have never been as clean as I have been in the last two years. How do I do it? Instead of amphetamine I use cathinones"* (focus group respondent, Poland). Where the use of e.g. methamphetamine might result in dismissal from the programme or other

sanctions, the use of NPS goes undetected. The injecting of diverted opioid painkillers in the Czech Republic is associated with the unstable quality and availability of heroin outside the main cities and the lack of OST in these regions.

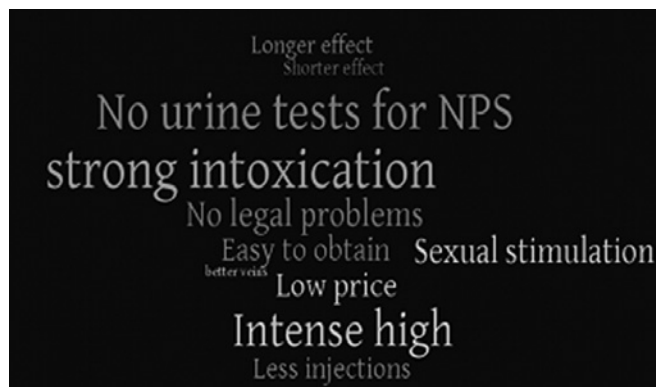


Figure 3 / Obrázek 3
RAR cloud of positive features of NPS noted by PUDH
Pozitivní charakteristiky NPL dle vyjádření PUD (cloudové znázornění na základě dat z analýzy RAR)

Positive effects reported

The constant purity of NPS, their strong intoxicating effects, and longer or shorter duration (both mentioned) seem at least equally important in explaining the popularity of NPS. The intense high of injected synthetic stimulants and their aphrodisiac effects were mentioned in the Czech Republic and Poland. In Greece, these same qualities were attributed to smoked methamphetamine. People injecting diverted pharmaceutical opioids praised the constant high, purity, and duration of the effect, reportedly resulting in reduced injecting rates and consequently less damage to their veins and fewer skin and soft tissue infections (SSTIs). They spend less time on injecting and chasing poor-quality heroin and more time with family and friends and noted improved social relationships.

NPS seem the drugs of first choice for only some of those consuming them. In Romania both PUDH and expert opinion estimate that half of PUDH have a preference for synthetic stimulants. “NPS give me more possibilities. Never before in my life have I used so many different drugs” (focus group respondent, Poland). But in all the countries NPS are also used because traditional drugs of preference are less available or of low or inconstant quality. “Yes, many people started to use ‘legal’ drugs in order to diminish the physical pain from heroin withdrawal” (focus group respondent, Romania).

Czech PUDH reportedly prefer methamphetamine over cathinones because of its predictability and euphoria and claim that methamphetamine is easier to control. But in Greece smoking methamphetamine is associated with se-

rious loss of control. (We return to this paradox below.) New drugs are also increasingly used in combination, both with one another and with traditional drugs. Mixing cathinones with heroin, benzodiazepines, and other drugs was mentioned in the Czech Republic and Romania, while Greek PUDH reportedly mix heroin and/or benzodiazepines with methamphetamine.

Negative effects reported

Short-term health consequences are not monitored in detail in any of the RAR countries, nor is there information available about the long-term effect of most NPS. Nonetheless, Figure 4 shows clearly that PUDH attributed many more negative features to NPS consumption. Both the focus groups and desk review suggest that injecting synthetic stimulants may quickly lead to strong cravings and a lack of control over one’s drug intake (psychological dependence) and in strongly increased rates of injecting, resulting in collapsed veins and skin and soft tissue infections (SSTIs).



Figure 4 / Obrázek 4
RAR cloud of negative features of NPS noted by PUDH
Negativní charakteristiky NPL dle vyjádření PUD (cloudové znázornění na základě dat z analýzy RAR)

Other negative consequences that were reported included the risk of fatigue, exhaustion, or collapse, loss of appetite, and weight loss, sometimes resulting in wasting syndrome. Binging (consuming a drug for days without sleep) on high doses of synthetic cathinones and the associated prolonged sleep deprivation quickly increase peoples’ vulnerability to a range of serious mental health problems, including panic attacks, paranoia, psychosis and (rebound) depression, short temper or rage, and memory and concentration disorders. “The police have been looking for me since I started using a “Thor Hammer”” (focus group respondent, Poland). Mental health problems go hand in hand with solitude and social isolation. “You get high together ... you stay together for five minutes ... then you run away, you cannot be together” (focus group respondent, Czech Republic).

In the Czech Republic and Greece, the use of methamphetamine represents, respectively, a well-established and

a new drug trend. The Greek focus group participants reported high levels of mental health problems among PUDH, while HIV infection among PWID has recently increased significantly (Hedrich et al., 2013; Kentikelenis, Karanikolos, Reeves, McKee, & Stuckler, 2014). Greek drug service providers and PUDH seem to consider Sisha as the ‘worst drug ever’ – Greek PUDH have apparently not yet learned to ‘live’ with the drug. Although methamphetamine remains problem drug No. 1 in the Czech Republic, our data (indirectly) suggests that Czech PUDH (and service providers) seem to have come to terms with methamphetamine to some extent. In fact, the mental health harms attributed to Sisha in Greece sound very similar to those attributed to synthetic cathinones by focus group participants in the Czech Republic, Poland, and Romania. In the Czech Republic, these were often discussed in terms of being worse than methamphetamine. Both in Greece and Romania these new drug trends coincided with recent increases in HIV infection among PWID and appeared in a context of austerity. Studies have not found causal relations between the surge in HIV infection and the emergence of Sisha or cathinones and suggested that funding cuts for syringe exchange may offer a better explanation (Hedrich et al., 2013; Kentikelenis et al., 2014). Nonetheless, one could perhaps not imagine a worse moment in time for the introduction of powerful and unknown stimulants into PUDH communities, in particular those traditionally using opioids. Both the *drug’s* pharmacological profile and important social *setting* variables (Moore, 1993a, 1993b; Zinberg, 1984) have changed drastically, resulting in an increased risk environment (Rhodes, 2009; Strathdee et al., 2010) in which PUDH are unlikely to develop a measure of control over the consumption of powerful and ‘alien’ drugs.

Risk of overdose

The injecting of synthetic stimulants may result in dose escalation and repetitive re-administration of drugs of unknown potency. Likewise, the difference between recreational doses and an overdose may be very narrow with some drugs, particularly when two or more substances are combined. PUDH have reported strongly increased heart rates, panic attacks, and even passing out when overdosing. They often self-medicate with benzodiazepines or antipsychotics. Deaths or mortality rates associated with NPS use are not available in the RAR countries studied, but, for example, in Poland the number of non-fatal overdoses has doubled in the last two years. Injecting pharmaceutical opioids is associated with a high risk of overdose, particularly for those switching from poor-quality heroin. The focus group respondents noted that SR morphine tablets and fentanyl patches are “10–15 times stronger than the normal diluted heroin”, which, in the case of the patches, is actually

a gross underestimation.¹ They also noted that the patches are cut into parts and that “*it depends on how much material you have in the part of the patch. You can easily get it wrong and overdose*” (focus group respondent, Czech Republic).

Risk of infectious disease transmission

NPS injecting is associated with very high injecting rates (up to 30–50 times a day reported in Romania), particularly when sold in brick-and-mortar shops. More recently, reduced supply and increased prices have reportedly had a moderating effect on the frequency of NPS injecting, but our study suggests that significant minorities of PUDH in these five countries continue to inject NPS. Increased frequency of injecting and SSTIs can be considered a direct indicator and a proxy for the risk of HIV and HCV transmission. The focus group participants suggested that among PUDH the risks of HIV infection are quite similar to those associated with traditional hard drugs: sharing of drugs and injecting equipment and material (syringes, needles). According to PUDH, injecting cathinones may result in intense cravings once the substance is purchased and injecting at the point of sale. In these places clean syringes are usually absent and used equipment might be shared. NPS and Sisha were also associated with an increase in sexual activity while under the influence. “*This drug gives me enormous sexual excitement. Then I have to masturbate to relieve the tension. I really like it!*” (focus group respondent, Poland).

The aphrodisiac properties attributed to stimulants are reportedly an important incentive for their use among men who have sex with men. The Portuguese focus group reported on “*Slamming*” in the course of “*Chemsex*” – injecting methamphetamine or synthetic cathinones while having sex with a large number of (often unknown) partners over extended periods of time along with copious use of GHB and a range of other party drugs among gay men. “*We are aware, people travel... and use a substance, I don’t know the name but it is a substance that they inject to increase sexual pleasure.*”

● 3 / 3 Interventions and policies targeting NPS

In all countries the dominant response to NPS and new drug trends relies primarily on legislative and law enforcement interventions. The public health response to NPS use among PUDH is only starting to take shape.

Legislation scheduling NPS and prohibiting their sales have effectively shut down the brick and mortar outlets and also affected their online availability to Czech, Pol-

1/ Fentanyl is 50 to 100 times more potent than morphine and 25 to 40 times more potent than heroin by weight (NDEWS, 2015).

ish, Portuguese and Romanian nationals. Nonetheless, new NPS continue to emerge on the market, via online outlets in particular. Scheduling of online sales was followed in all four countries by NPS emerging in the “shadow economy” and in more traditional drug trafficking structures that overlap with both criminal and friendship networks (between 2011 and 2013).

Innovative harm reduction, prevention, and treatment responses dedicated to NPS have barely been developed in the five countries. Existing harm reduction organisations have difficulties in adjusting to these new drug trends. Some harm reduction programmes have started modest information campaigns on the potential risks posed by NPS. For example, Monar in Krakow distributes a deck of (football card-style) information cards on a wide range of new and known substances and SANANIM in Prague distributes information on NPS in its journal “Dekontaminace” (Decontamination), which is circulated via drug services nationally and online, and widely read among PUDH.

Drug testing is available in Portugal and mostly focuses on nightlife and festivals. In Prague, outreach programmes and low-threshold services collaborated with the Department of Addictology and the Toxicological Centre at the First Faculty of Medicine of Charles University in testing NPS samples from the PUDH market. Funded by the EU I-Trend project, the programme contributed to prevention, harm reduction, and research goals but was terminated after the I-Trend project ended.

Adaptation to the changed consumption patterns and the associated chaotic behaviours and mental health problems is complicated by economic conditions and political priorities in all five countries, but in particular in Greece and Romania. This has resulted in drastic budget cuts for drug treatment and needle exchange and harm reduction services. Both countries have faced rapid increases in HIV prevalence among PWID. Given the increased rates of injecting associated with NPS injecting, the cuts in syringe exchange funding are particularly disturbing. On the other hand, the replacement of poor-quality heroin by diverted pharmaceutical opioids in Czech rural regions seems an intriguing but clear indicator of the potential of substitution treatment.

Study Limitations. The limitations of our study centre on missing data or lack of detail and deviation from the research guidelines. The EMCDDA Snapshot Methodology presented some of the RAR teams with difficulties. In many cases it could not be established whether websites selling NPS were hosted and run by companies within the countries being investigated or elsewhere in or outside the EU. When products were offered in the local languages, this often involved computer-aided translations. Likewise, at some moments the UNODC classification of NPS and their toxicological complexities surpassed the chemistry skills of

the project teams. Nonetheless, we found extensive similarities (Lincoln and Guba, 1985) across the five research sites between most of the core questions of this RAR, in particular concerning drug use patterns, consumer preferences, market factors, and the health consequences attributed to NPS, while differences between countries were explained by local peculiarities or variations in the risk environment of these drugs. Overall, the findings do not vary substantially from the data reported to EMCDDA. The variety in the data does not allow for estimates of the number or proportion of PUDH that use NPS or Sisha, but the desk review, the assessment of the offline and online NPS availability in the participating countries, and the focus groups bring together important and up-to-date new information on the actual trends in NPS consumption and the NPS market in the Czech Republic, Greece, Poland, Portugal, and Romania.

● 4 DISCUSSION

The RAR suggests that the uptake of NPS among PUDH varies between the countries that were investigated. PUDH have a preference for substances that resemble their traditional drugs of choice, opioids and in particular stimulants.

Clearly, in all of these countries the genie is definitively out of the bottle. We can distinguish both *pull* and *push* factors in the attraction of NPS. Strong intoxication, stable purity, and availability, but also avoiding law enforcement or sanctions when in drug treatment seem to fuel the popularity of NPS, in particular where traditional drugs of poor quality are sourced in unreliable, high-risk drug markets, effective treatment is underdeveloped, or contracting economies have led to illicit drugs ceasing to be affordable. In this context, NPS increasingly attract both aging populations of heavy opiate and stimulant consumers and new generations of vulnerable young people. The shift to methamphetamine smoking and its manufacture in residential areas of Athens certainly fits the larger trend towards stimulants, witnessed throughout Europe and beyond. At first hand, the rising use of diverted pharmaceutical opioids in the Czech Republic is at odds with this *chemical Zeitgeist*.

However, closer scrutiny of the data suggests that all these new drug trends among PUDH – whether these revolve around stimulants or opioids or around scheduled drugs or not – seem only superficially driven by pull factors, such as curiosity, a penchant for experimentation and intoxication, or other personal motives, but by push factors in particular. The available data for the Czech Republic and Romania suggests that the rise in the injecting of new synthetic stimulants coincided with reductions in the availability and quality of heroin and, in the Czech Republic, methamphetamine. The use of its smokable variant, Sisha, in Greece and the injecting of pharmaceutical opioids in the

Czech Republic are equally associated with shortages of the traditional drug of preference. In all these countries, the changing landscape of intoxication is further driven by the poor availability of OST and appropriate treatment options in general – whether structural or the results of austerity measures – and by punitive drug testing practices in OST programmes.

While legislative responses have reduced open sales in smart shops, their closure has pushed NPS underground and online. Changes in the legal status of NPS in Romania, Poland, and the Czech Republic reportedly facilitated the diffusion of NPS into vulnerable populations. Shortly before NPS were scheduled, web shops sold off their remaining stock at drastically reduced (wholesale) prices. Large NPS stocks may again end up in more vulnerable segments of the drug market across Europe, as UK web shops have started to sell off their remaining stock in anticipation of the April 6, 2016 UK Psychoactive Substances Act – a ‘blanket ban’ on (new) psychoactive substances (Figure 5). Furthermore, there are now also online wholesalers that exclu-

sively sell large quantities of NPS (Figure 6). These practices suggest that 21st-century online drug distribution channels do not necessarily replace traditional distribution channels. In contrast, they seem to seamlessly harmonise with one another. This has important topical value for the epidemiology of NPS, synthetic stimulants in particular, and their diffusion into vulnerable populations.

The negative effects of NPS that were described were mostly typical stimulant drug effects, and long-term consumption of cathinones is described in similar terms to that of traditional stimulants and sometimes as more unpredictable and with worse mental health outcomes. Cocaine and methamphetamine use are associated with risk behaviours for the transmission of blood-borne viruses (BBVs), including high rates of injecting and sexual activity, unprotected sex, needle sharing, and HIV infection, while prolonged heavy use of both stimulants is associated with serious mental health problems (Grund et al., 2010). Whether these risks can be translated one-on-one to synthetic cathinones remains an open question, as few primary studies into the potential associations between these new stimulants or other NPS have been conducted.

The drug-related risks of BBV transmission reported in the RAR centre around high injecting frequency, the use of non-sterile injecting equipment, and other known risk

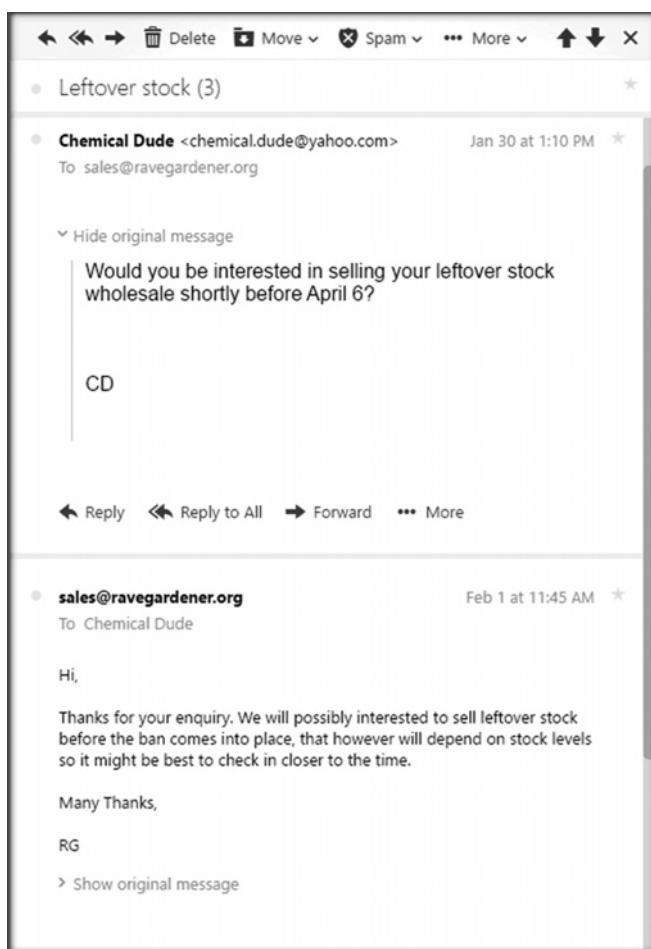


Figure 5 / Obrázek 5
 Diversion Opportunities in Anticipation of UK Legal Changes on April 6, 2016
Možnosti přesunu NPL na černý trh v reakci na očekávané legislativní změny ve Velké Británii k 6. 4. 2016



Figure 6 / Obrázek 6
 Online NPS Wholesale
Internetová velkoobchodní nabídka NPL
 behaviours. Sexual risk behaviours are less well explored

but are attributed to the aphrodisiac properties of stimulants. Slamming, reported by the Portuguese RAR team, has raised the concern of health authorities in Amsterdam (Knoops et al., 2015), London (Bourne et al., 2015; Kirby & Thornber-Dunwell, 2013) and Paris (Foureur et al., 2013). Slamming and Chemsex may be a “small sub-population behavioural trend” (Stuart, 2015), but our study suggests that sex on chemicals is perhaps one of the attractions of NPS that appeals to a wider population, while many studies suggest that the idea of chemically enhanced sex is neither new, nor determined by sexual preference (Cormier, 2015).

Pointers for intervention and policy development

Elsewhere we discussed the current legal framework of the five study countries (Vavrincikova et al., 2016) but the RAR suggests that legislative instruments and law enforcement are better used prudently with regard to NPS and with restraint; these clearly offer no panacea and may result in unanticipated consequences (Merton, 1936).

Given the high injecting frequencies reported, sufficient “personal” supplies of syringes and other injecting paraphernalia are a requirement for people to be able to protect themselves and their injecting partners. Focus group participants emphasised the importance of existing evidence-based public health interventions, such as needle exchange and OST, and the need for drug-checking programmes, also targeting PUDH scenes. Several EU countries allow some form of drug checking, albeit mostly on a modest scale. In Prague, the authorities allowed drugs from the street scene to be tested but did not extend the funding of the programme when EU funding ran out. Given the capricious nature of the NPS market and the ongoing penetration of NPS into vulnerable communities across Europe, the Union-wide introduction and scaling-up of drug testing programmes and careful monitoring of both existing and emerging drug scenes could greatly contribute to speeding up the development of appropriate and evidence-based policy responses.

Short communication and reporting lines between the drug scenes, outreach teams and public health services, and policy makers should facilitate the distribution of information on the dynamic NPS market and on consumption patterns and the potential risks – *in both directions*. Peer support and education strategies may reach heavy NPS consumers presently not connected with services. Where NPS are used on the street and result in public health and public order problems, drug consumption rooms may help both to stabilise chaotic drug consumption patterns and reduce the public nuisance, civic anxiety, and moral panic. Law enforcement bodies should be educated about more effective and humane policing options for handling consumers of synthetic stimulants in the public domain. Low-threshold opioid substitution treatment will probably benefit PUDH

involved in NPS and heroin. Stimulant substitution treatment, e.g. with dexamphetamine, should be investigated for heavy consumers of both traditional and new synthetic stimulants. Substitution programmes should have evidence-based and person-centred rules. Failure to comply should be a reason for increasing treatment options, not for limiting access or dismissal.

The use of powerful diverted pharmaceutical opioids and the increasing number of legal synthetic opioids notified to the EMCDDA suggest that naloxone distribution and training should not only target traditional heroin consumers, but also be available to those taking newly emerging opioid agonists. Harm reduction education should be made a compulsory part of discharge protocols in all treatment – irrespective of the treatment philosophy. Closer cooperation between toxicological laboratories, medical institutions, and harm reduction services can facilitate proper and timely intervention in overdose cases. As the epidemics of heroin injecting have stabilised in Europe, the attention paid to drug injecting and HIV prevention is waning in many member states.

Our study and others suggest that there is little reason for reduced public health vigilance. To paraphrase the American abolitionist Wendell Phillips (1811–1884), eternal vigilance is clearly also the price of public health.

The role of the authors: Jean-Paul Grund designed all the research activities of the NPSinEU.eu, proposed the overall study design, designed and supervised the analysis, and drafted the present manuscript. Together with Lenka Vavrincikova, Hana Fidesova, and Barbara Janikova, he designed all the study instruments and protocols. Lenka Vavrincikova conducted the initial analysis of the desk review data provided by the country RAR teams. Hana Fidesova and Barbara Janikova conducted the initial analyses of, respectively, the assessment of NPS availability and the focus group data. Michal Miovsky participated in the data interpretation and in the preparation of the manuscript. All the authors contributed to the development of this article and approved the final version of the manuscript.

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DEAR EDITOR, THE EMPEROR'S NEW CLOTHES?

The title of the paper by Jean-Paul Grund and his colleagues in this volume is very apt (Grund et al., 2016). It suggests, despite the picture conveyed by the media, officials, and others of NPS as a new phenomenon requiring new responses, that in reality the challenges they present are in essence similar to those arising from 'traditional' patterns of heavy drug consumption. While in many respects correct, it is also important to acknowledge there are new challenges in this area.

One implication, which the authors take up in their discussion, is that rather than relying on legislative restrictions and law enforcement interventions to meet this 'new threat', it is more important that public health responses adapt and strengthen existing harm reduction measures, taking account of local or regional variations in availability and patterns of use, as well as of wider developments such as online marketing. This is a sound conclusion, as regardless of the legal status of these substances, public health challenges will continue to exist. It is an additional challenge here to respond adequately to the use of highly toxic compounds that, even if only used by few and only transiently available, are still causing considerable harm.

The EMCDDA has been monitoring developments in NPS in the EU for more than a decade. Although the number of specific new substances identified in Europe shows a considerable rise over this time (e.g. over 100 in 2014), the broad drug categories involved have remained essentially the same (EMCDDA, 2015). The growing importance of the

internet in the supply of NPS, as well as in information dissemination and advice, has also been noted. Regarding NPS use among heavy drug-using populations, the most visible (and worrying) pattern involves stimulant-type drugs, including by injecting, though opioid-type drugs and synthetic cannabinoids/hallucinogens are also linked to problems in some areas.

Grund and his colleagues note that while the patterns of use of NPS vary between countries and local settings, in general it can be argued that heavy drug users have a preference for substances that resemble their traditional drugs of choice, opioids and, in particular, stimulants. It is interesting to note, however, in this context the transitions that have been observed between opiates and stimulant drugs in some countries. And this raises the question of the extent to which polydrug consumption patterns have become normative and patterns of use more variable over time than in the past. The authors further note that the choice of a particular drug (NPS or 'traditional') is influenced by a variety of push and pull factors that differ according to changing circumstances, such as the availability, price, quality, and market risks of drugs in different countries and in different settings. These are interesting aspects to explore in future research and monitoring exercises.

From the point of view of public health responses, changing patterns of drug availability and use, including, but not restricted to, NPS, mean that services may be confronted with changing patterns of drug use and routes of ad-

ministration involving novel drugs with new names, or with old drugs known elsewhere but appearing locally for the first time, or with new groups of drug users consuming either new or old drugs or both. This may appear both confusing and threatening to the public, the media, politicians, and other authorities. However, it is also important to recognise that local health services and NGOs who have been delivering harm reduction, treatment, and health promotion to drug users for many years have the knowledge and competence to adapt and respond to these new challenges, which in many cases are old challenges in a new guise.

Encouragement, advice, and, where needed, training for existing harm reduction services could mean, for example, that: needle and syringe programmes take account of the very high frequency of injection observed among some groups of stimulant injectors; or that funders are reminded that drug-checking programmes can play important roles in identifying high-risk substances; or that outreach efforts are supported to reach new risk groups and settings and increase the uptake of HIV and HCV treatment; or that the transmission by sexual routes of infectious diseases is taken as seriously as injecting-related risks; or that community-level naloxone programmes to reduce overdose deaths are put in place; or that internet-based interventions for information, prevention, and treatment are systematically researched and implemented.

Harm reduction first gained importance in Europe in response to HIV linked to heroin injecting during the 1980s

and 1990s. By the first decade of this millennium, harm reduction had become accepted as a major pillar of EU and national policies across Europe (Hedrich et al., 2008). Since then, changing economic and political agendas, together with perceptions that heroin no longer poses the threat it once did, have threatened to diminish commitment to harm reduction as a priority. In some countries, this has coincided with changes in administrations so that collective, historical memories of why harm reduction became important appear to have faded. Serious outbreaks of HIV among drug users in Greece and Romania in 2011, followed by risk assessments conducted by the EMCDDA and ECDC (Pharris et al. 2011; Hedrich et al., 2013), demonstrate that the situation in some EU countries remains fragile and that there is an urgent need to maintain and enhance harm reduction policies and programmes. Developments regarding NPS do not change this conclusion. Behind the Emperor's new clothes there are existing structures, services, professionals, and knowledge that can adapt and respond to the challenges posed by new manifestations of old problems. All they need is continued support (and funding).

Sincerely,

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