



# NIPS

New Psychoactive Substances among  
People Who Use Drugs Heavily.  
Towards Effective and Comprehensive  
Health Responses in Europe.

## ***Lessons Learned & Recommendations from the NPSinEurope.eu Project***

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Hana Fidesova & Barbara Janikova



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Substances in Europe

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## Introduction

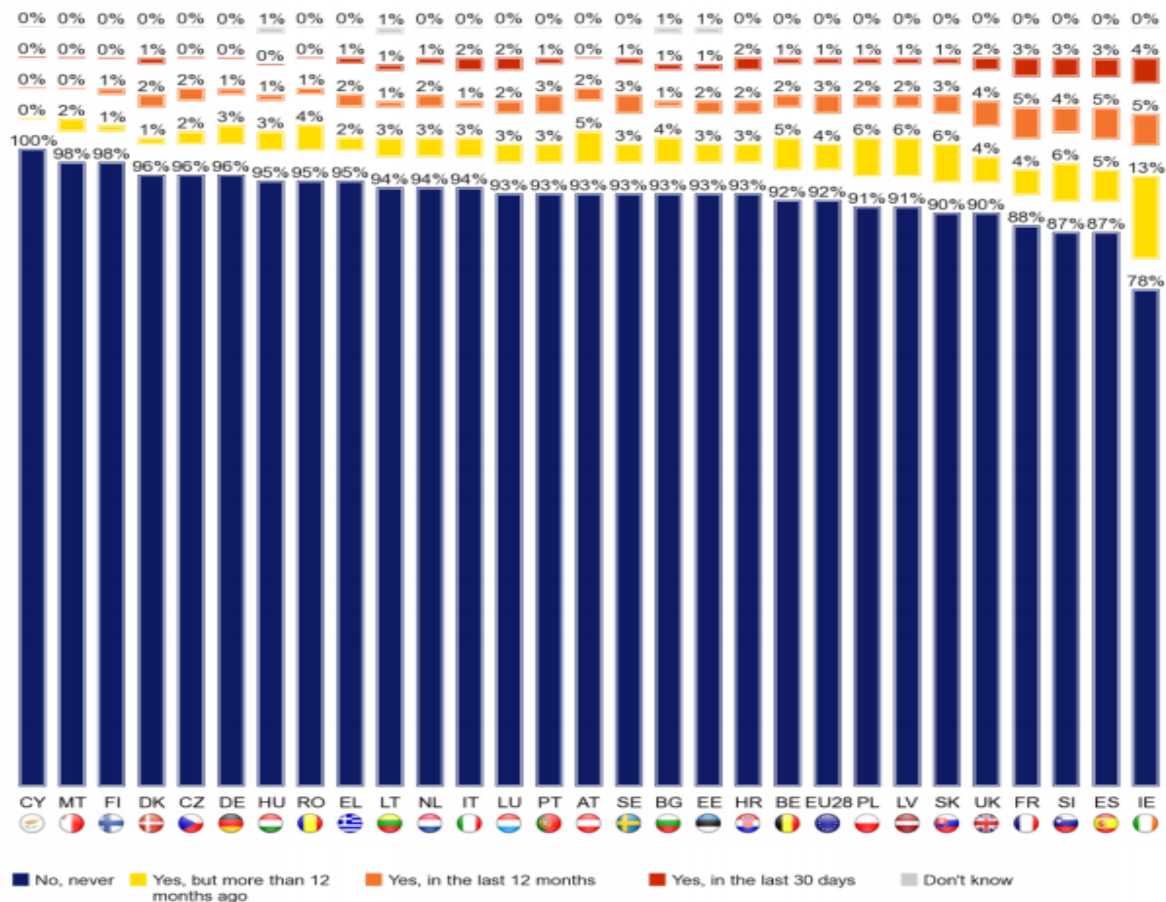
Important public health concerns over their growing use and unscheduled status have turned New Psychoactive Substances (NPS) and *iDrugs* (psychoactive substances sourced through the Internet) into a high drug policy priority in the European Union.

Despite the 2011 *EU Pact Against Synthetic Drugs*, the number of newly detected substances continues to increase. 101 new substances were reported to the Early Warning system (EWS) in 2014, representing a 25% increase over the previous year. 450 substances are monitored in total, with more than half identified in the last three years alone (EMCDDA, 2015).

**People Using Drugs Habitually or Heavily**  
*The NPSinEurope project focused on heavy NPS consumption patterns in both traditional and new drug using populations. In line with recent discussions on 'drug' terminology and definitions (Stallwitz, 2012; Ahern, Stuber, & Galea, 2007; White, 2009), in this project, we use the term people using drugs habitually or heavily (PUDH), a term that neutrally describes peoples' drug use behaviours rather than defining the whole person and reflects the diversity of the issues and populations targeted in this project (J.-P. C. Grund, Vavrincikova, Janikova, Fidesova, & Miovsky, 2016).*

According to UNODC there are now more NPS than controlled drugs (UNODC, 2013). Nonetheless the prevalence of NPS use among young people varies greatly across the EU (see figure 1.).

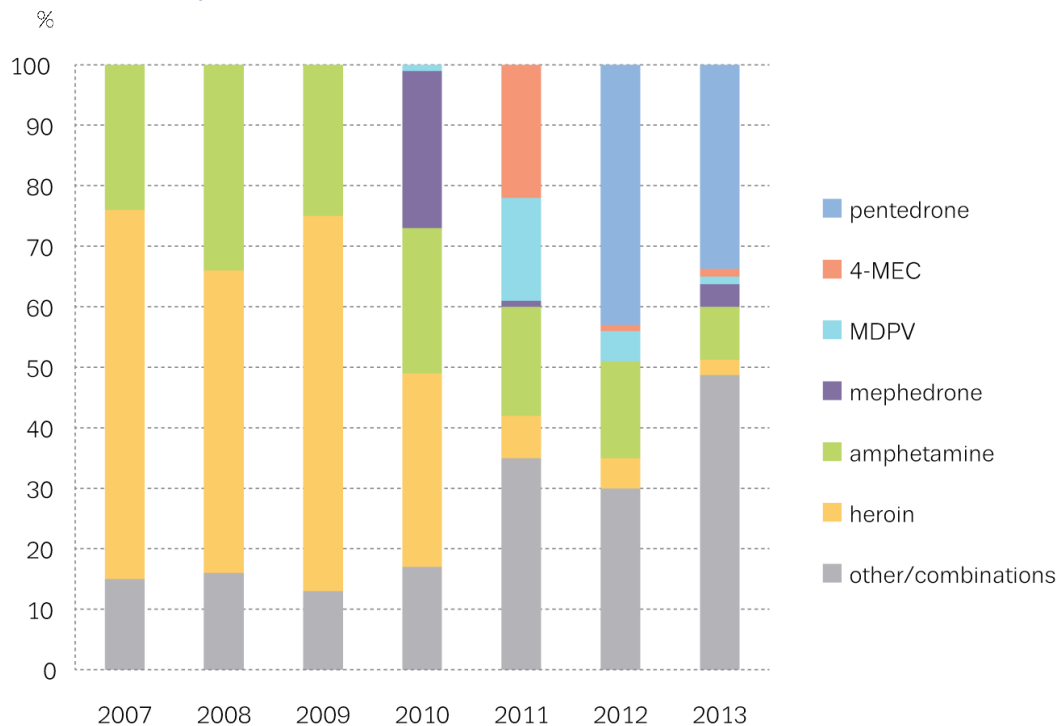
Figure 1. Lifetime Use of NPS Among Young Europeans, aged 15-24, Flash Eurobarometer 401, 2014.



In the Czech Republic, Ireland, Poland, Romania, the United Kingdom and several other EU member states, NPS, synthetic stimulants in particular, have diffused into both traditional populations of

people who use drugs heavily (PUDH) and among new generations of vulnerable youth. Countries, such as France, Austria, Spain and Sweden have reported localised outbreaks of synthetic cathinone injecting in specific subpopulations, such as people frequenting harm reduction services, in treatment or in prison. Romania and Hungary, on the other hand, reported widespread injection of synthetic cathinones. Various consumption patterns have been reported, including injection of combinations of synthetic cathinones and heroin. In Hungary and Romania synthetic stimulants seem to have almost pushed heroin from the market. Figure 2. illustrates how, in Hungary, heroin, being the most injected drug in 2007, became a marginal phenomenon within a period of four years.

**Figure 2. Trends in drug injecting in Hungary (analysis of residue in injecting equipment returned to NSP services) Source: Hungarian national focal point, 2014**



Source: Hungarian national focal point, 2014

## New Drugs with Unknown Harms

Potential health risks of NPS are augmented by the *unknown nature* of the pharmacological and toxicological activity. Some new drugs are, for example, extreme potent in minute doses (Zamengo, Frison, Bettin, & Sciarrone, 2014). Sometimes these are used as adulterants in, or mislabelled as controlled drugs (Giné, Espinosa, & Vilamala). Ignorance of the actual content of psychoactive products ingested may combine with low awareness of the risks of drugs in general or a false sense of security towards unscheduled compounds (Corazza, Simonato, Corkery, Trincas, & Schifano). Lack of drug experience or switching to different drug classes and/or modes of drug delivery (Péterfi, Tarján, Horváth, Csesztregi, & Nyírády, 2014), poverty and austerity measures (Fountoulakis & Theodorakis, 2014; Hedrich et al., 2013; Kentikelenis, Karanikolos, Reeves, McKee, & Stuckler, 2014; Tarján et al., 2015) and other unknown factors may further contribute to potentially harmful use of NPS and various combination drug use patterns that increase risks for overdose, transmission of blood borne viral disease, mental health problems or other health risks.

## Response Development a Key Priority

This seemingly inexorable surge in the availability of new, unscheduled drugs is increasingly challenging national and EU drug policies, as harm reduction, prevention and drug treatment interventions alike. In encouraging effective responses to the rapid changes in drug consumption patterns and markets, the European Union's Drug Prevention & Information Program has awarded the development of appropriate responses to NPS a key priority area. The EU/DPIP funded project "*New Psychoactive Substances among People Who Use Drugs Heavily. Towards Effective and Comprehensive Health Responses in Europe*" ([npsineurope.eu](http://npsineurope.eu)) aimed to contribute to the development of innovative and effective health promotion interventions targeting emerging NPS use in Europe, in particular in response to more hazardous patterns of use and in vulnerable populations.

## Project Objectives

The overall project objectives of the [npsineurope.eu](http://npsineurope.eu) were to:

- (I) provide an overview of the use of new psychoactive substances (NPS) in populations of People Who Use Drugs Heavily (PUDH) in the EU28 countries and identify the associated risks for harm and the existing legislative, preventive and harm reduction responses;
- (II) assess, identify and describe harmful patterns of NPS use among PUDH, NPS related risks and harms in 5 selected countries, as well as identify and prepare adequate tailored public health responses;
- (III) develop and implement targeted pilot interventions for prevention, demand reduction and harm reduction targeting NPS use among PUDH;
- (IV) build best practice guidance and capacity among harm reduction workers towards improving harm reduction responses; and,
- (V) disseminate the results of the Europe-wide inventory, 5 country assessment and local pilots on public health responses, through an online resource centre and a training manual, and at regional and national conferences.

The project included four work streams and represented an important example of community based research (WS1, WS2) informing the development of harm reduction responses to NPS (WS3) and their dissemination (WS4) in EU member states.

Work stream 1 consisted of an EU wide overview of NPS consumption among PUDH and work stream 2 involved a Rapid Assessment and Response (RAR) study of harmful patterns of NPS use and the associated risks and harms in the five partner countries – the Czech Republic, Greece, Poland, Portugal and Romania. In work stream 3, harm reduction projects from these countries translated the research findings and worked to identify and prepare adequate and tailored public health responses to high risk NPS consumption in their countries. In this document we present a number of Lessons Learned in the project and formulate recommendations for future policy and service development. First, we shortly summarise the outcomes of work stream 3.

## Outcomes WS 3, Implementation: From Research to Practice

Work stream 3 focused on the implementation of pilot harm reduction interventions that targeted NPS use among PUDH and on skills and capacity building among (professionals and peer) service providers. The activities in WS 3 built on the results of WS1 (EU-wide Inventory) and WS2 (RAR in five selected countries).

The Regenboog Groep developed a step-by-step guidance document for the implementation of the five pilot interventions and provided the implementing partners with ongoing support and supervision during the implementation phase. The guidance document was complemented with a training manual that provided input into the development and implementation of national trainings by the partners. The Regenboog Groep has evaluated the implementation of the pilot interventions, using feedback forms, interviews and focus groups.

Four partners (Czech Republic, Greece, Poland, Romania) adapted their interventions during the process, due to changes and developments in the local (political) situation. All partners faced particular challenges during the intervention phase and specific needs were formulated. Most of the interventions, which have been carried out will continue in one way or the other after the project is finalised. Future staff training events are planned as well. All partner reported that the project activities supported and improved their capacity to work for and with PUDHs.

Detailed results and conclusions of WS3 are reported in: Schiffer K & Schatz E. (2016) *RAR – Response Implementation Report*, Amsterdam, Federation Rainbow Group. (<http://npsineurope.eu/index.php/resource-centre>)



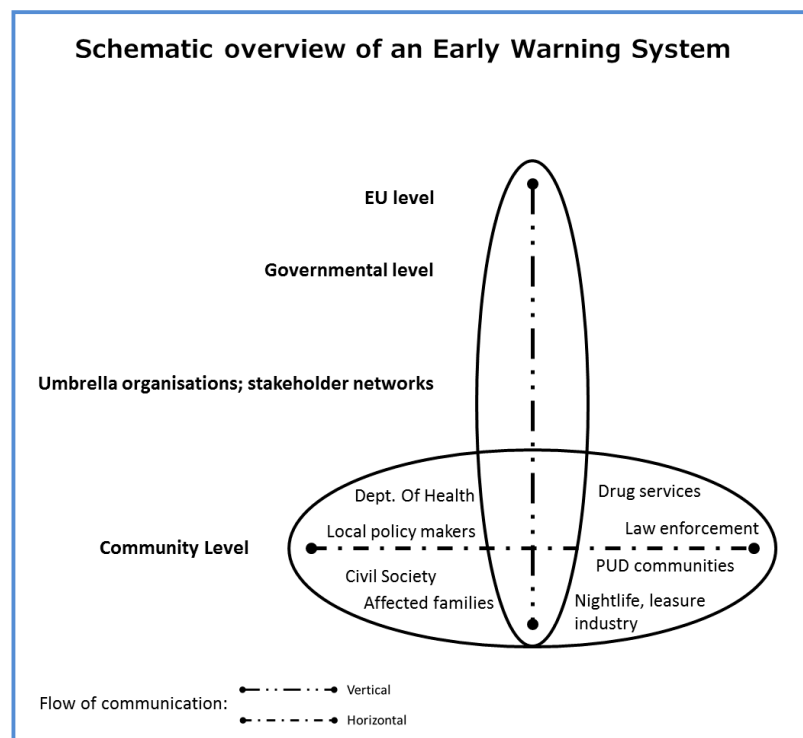
## Key Lessons Learned

### Lesson 1. NPS monitoring and data collection should be a multi-level priority

Collecting reliable and comparable data for both the EU overview (WS1) and the 5-country RAR (WS2) proved difficult in several countries. Only few EU countries invest significant resources in monitoring, risk assessment or targeted studies of NPS. Many countries lack of a good functioning early warning system and undertake only limited efforts at properly monitoring the use of NPS. But, the sourcing of powerful, but (initially) legal psychoactive substances in the Internet and their diffusion into traditional offline illicit markets that cater to traditional populations of PUDH and new generations of vulnerable youth are not yet properly understood.

Early warning systems are not only essential tools for national drug policy makers. The nature of iDrugs implicates that future drug trends will be less predictable, capricious and no longer following traditional pathways of drug diffusion (Ferrence, 2001; J.-P. C. Grund & Blanken, 1993; Katz, Levin, & Hamilton, 1963; Parker, Newcombe, & Bakx, 1987; Rogers, 2003). As a result, new drug trends no longer necessarily start in major cities but may emerge in any municipality, large or small, urban or rural. The diversification and glocalisation of drug use requires local authorities and drug services to increase efforts to monitor NPS and emerging drug trends as well, in order to tailor service provision to locally emerging changes in drug consumption patterns.

Widespread dissemination of information among key stakeholders, increased communication and regular exchange – both horizontally and vertically – are important conditions for effective early warning systems. Input should rely on all relevant stakeholders, including people who use NPS and harm reduction services and outcomes should be available to all of these parties. A well implemented and maintained early warning system can help countries and municipalities alike in reducing drug related harms, such as overdose and infectious diseases.



The present study confirms the importance of coordinated responses at the municipal level and stresses cooperation between drug services, emergency departments, toxicological and forensic laboratories, drug monitoring centres and policy makers in formulating effective prevention and harm reduction responses tailored to local conditions. Our data also point at the increasing value of

drug-checking services in staying abreast of the rapidly mutating NPS market, in PUDH scenes, nightlife and festival environments and, increasingly, online. Where the NPSinEurope project focused on the development of tailored harm reduction intervention targeting NPS use among PUDH, another recent EU-funded project, *Local Pass*, developed a useful toolkit that allows local stakeholders to early identify emerging local drug trends, assess their potential risks and, when needed, develop appropriate responses ([www.localpass.eu](http://www.localpass.eu)).

## **Lesson 2. NPS use is influenced by availability and quality of both traditional drugs and treatment**

Our data furthermore suggest that the uptake of new substances is also influenced by the availability of traditional drugs, access to (substitution) treatment alternatives and punitive drug testing.

In the Czech Republic, injection of diverted pharmaceutical opioids is most prevalent in (rural) regions where heroin is of poor quality and substitution treatment largely absent. In Hungary and Romania, legal highs landed as heroin became short in supply and of increasingly poor quality. Within years after their introduction, synthetic stimulants spread rapidly among IDUs in Budapest and Bucharest and to provincial cities. When in Greece austerity measures hit the poorest in particular, people could no longer afford heroin, giving rise to a cheap homemade methamphetamine, called Sisha. Both in Greece and Romania, the switch from heroin to stimulants coincided with serious decreases in harm reduction services and drug treatment, reducing access to sterile injecting equipment when injecting frequencies were increasing. In contrast, in Portugal and the Netherlands, where all drug use is decriminalised and traditional drugs, such as heroin or cocaine, are relatively easy to obtain and substitution treatment widely available, NPS have not penetrated PUDH populations – not when these were legal and not after their scheduling.

Increasing access to opioid substitution treatment (OST) may contribute to containing the use of NPS among people using heroin. However, in our studies punitive drug testing comes forward as an important reason for taking NPS among people in opioid substitution treatment programs. In several countries additional (non-opioid) drug consumption is rarely addressed in OST programs and people in OST testing positive for illicit drug use still risk termination of their treatment or other punishment. We learned that this punitive approach is an important incentive for using NPS among OST participants, in particular in Central and South-East Europe, as the urine tests typically used in OST programs only measure the presence of scheduled drugs. Punitive drug testing has no basis in science, is at odds with principles of equivalence (CF. treatment of other chronic diseases) and simply inhumane.

Our data suggest that PUDH tend to use NPS as substitution for traditional drugs when these are of poor quality or hard to come by and in avoiding highly policed illicit drug markets. In countries where traditional drugs of decent quality are available and can be purchased at a 'reasonable' price without risking prosecution when participating in drug markets, such as in Portugal or the Netherlands, PUDH seem to stick to traditional drugs and NPS are mainly used by young drug experimenters, in the party scene or by psychonauts. In countries, where drug use is strongly criminalised and drugs are expensive or of poor quality (e.g. Poland or Romania), PUDH tend to switch to NPS, although these substances might be more harmful than traditional drugs.

### **Lesson 3. Mental health problems associated with NPS use among PUDH seem typically stimulant related problems**

Both drug service workers and NPS consumers pointed at high rates of psychopathology and mental health complaints, which they associated with heavy injection of synthetic cathinones. Sustained heavy consumption of drugs with unknown pharmacology and toxicology may result in both short and long term consequences formerly unknown to consumers and service providers alike, but at this point one can only “*reason by analogy*” over the harm potential of most NPS.

In our analysis many of the mental health problems reported seem to be typical stimulant problems. The outcome of high dose and persistent use of any stimulant is bound to lead to sleep deprivation, poor nutrition, exhaustion and decreased immune response, heralding psychotic episodes, paranoia and erratic behaviours. Introduction of stimulants into a primarily heroin using population may drastically increase the prevalence of mental health problems, in particular in street scenes (Erickson, P.G., Adlaf, E.M., Smart, R.G. and Murray, 1994; J. P. Grund et al., 1992; J. Grund et al., 2010). The descriptions of the mental health problems associated with NPS injection are, for example, reminiscent of those attributed to crack as it emerged in heroin scenes across Western Europe in the 1990s (Grund, Adriaans, & Kaplan, 1991). In response to crack in the 1990s, German harm reduction organisations, for example, developed “Tagesruheräume,” day resting spaces, where heavy crack consumers could crash on a bed and have a shower and a meal once they get up again (see: [http://www.bisdro.uni-bremen.de/crack\\_zusammenfass\\_stoever.htm](http://www.bisdro.uni-bremen.de/crack_zusammenfass_stoever.htm)). This intervention addressed the key predictors of stimulant related mental health problems and may also prove useful in addressing heavy NPS consumption in the public space. Nonetheless, the rapid succession of new stimulants, each having perhaps partly different effects, may further complicate attempts at control or self-regulation.

### **Lesson 4. NPS are a Challenge to Harm Reduction and other Drug Services**

Harm reduction workers and people who use drugs often lack information on NPS. There is a clear need for ongoing training and peer involvement, as well as for improved cooperation and networking with local stakeholders. NPS consumption among PUDH brings up occupational safety issues for harm reduction services.

Harm reduction services and NPS consumers alike often don't know exactly what substances are actually used, what their effects and potential harms are, or what harm reduction advice to provide. Information on new psychoactive substances is often only available in academic institutions or government offices. Harm reduction service provision will increase in quality when the lines between science and practice are short and when relevant information is timely and regularly exchanged, such as at regular interdisciplinary meetings and conferences and by publishing scientific results in clear and understandable language. Ongoing and integral training and capacity building among services providers, harm reduction workers and peers is needed. Training should not only focus on substances, effects and harms, but also on the development and implementation of new harm reduction messages and measures.

Staying attuned to the drug preferences and service needs of existing clients of low-threshold facilities or querying drug using outreach contacts on their NPS use, their motivations for doing so and the barriers to safer drug use these present are important methods for learning about locally emerging drug trends and their potential for harm. These classic offline data collection methods are increasingly combined with online data collection and monitoring of drug discussion forums. Online drug discussion forums are nowadays an equally important resource of community knowledge, experiences and perspectives on NPS and therefore a *gem* to the 21<sup>st</sup> century drug worker. Simple and free Internet tools also allow for investigating local contributions to these forums potentially allowing the identification of local trends in drug consumption even before these become visible in the offline environment.

The project partners indicated that it is vital to cooperate with various stakeholders in the field. This should include other harm reduction services and other public health services, but also (online) NPS using communities, emergency rooms, club owners and police. Peer involvement should be promoted and implemented widely to share information about newest trends and promote 'safer use' among NPS users. This also helps to inform people who use NPS, who are often more difficult to reach than people using traditional drugs. The online environment offers new opportunities for working with drug using communities and supporting peer-based sharing of NPS information and harm reduction skills that can empower consumers to avoid and reduce associated harms. The [NPSinEurope.eu](http://NPSinEurope.eu) project has piloted new "Netreach" approaches, in which traditional and effective outreach methods are translated to the online environment, as well as several other new interventions.

Irrational behaviours and sudden outbursts of aggression may result in deteriorated client-provider relationships in harm reduction and treatment programs, and in decreased job satisfaction among program staff. Drug service workers and other health professionals should be better educated about NPS and trained in stimulant harm reduction, including in professionally handling tensions or aggression related to heavy consumption. Proper training and regular skills building activities will allow drug service workers to better navigate occupational hazards in changing drug scenes.

## Lesson 5. $F1 = -F2$ , or the interaction between NPS policies and markets

Our data suggest rather clear links between the diffusion of NPS into more vulnerable population segments and legislative responses to their sales in the upperground economy.

The closure of brick and mortar stores in the Czech Republic, Poland and Romania reportedly resulted in strong decreases in the overall availability of NPS. But subsequently, these newly banned substances, powerful synthetic stimulants in particular, became increasingly available in friendship networks of people using drugs (PUD). Indeed, 68% of young Europeans consuming NPS sourced these drugs from friends (TNS Political & Social, 2014). Importantly, NPS became part of the “shadow economy,” sold in for example in sex shops, casinos or bodybuilding shops and, importantly, increasingly, in traditional drug dealing structures that cater to people who inject drugs (PWID).

This development was further strengthened when Internet NPS shops registered in these countries were closed. Shortly before they were taken down, many web shops sold-off their remaining stock at drastically reduced (whole sale) prices. This development was also described after the banning of mephedrone in the UK (Power, 2013).

Figure 3. Closeout Sales of NPS web shops, 2016

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## ResChems News Update

### Psychoactive Substances Act 2016

The act is expected to come into force on 6 April 2016.

**We will continue to trade until several days before!**

For more information about the act, [click here](#)

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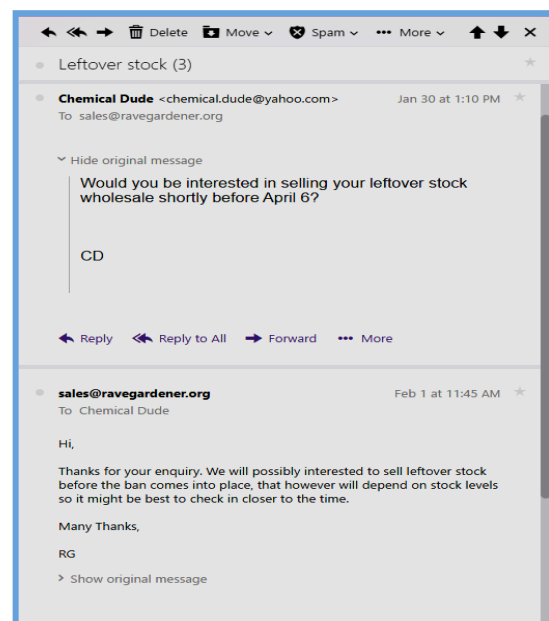
The same phenomenon was actually observed before the scheduled enactment of the UK psychoactive substances ban on April 6, 2016<sup>1</sup>. Web shops offered NPS at drastically reduced retail prices in the preceding months (see figure 3.) and even continue to introduce new products, such as 2C-B-FLY pellets (see figure 4.).

Figure 4. "The end is coming soon, so do not miss out..."

Figure5. From iDrug to Black Market Drug

More importantly, iDrugs entrepreneurs have shown to be amenable to selling off their wholesale stock shortly before the UK ban is enacted (see figure 5.). This suggests that 21<sup>st</sup> century online drug distribution channels, do not necessarily replace traditional distribution channels, but rather seem to seamlessly harmonise with one another. Furthermore, a German study, cited in the WS1 EU wide overview (Janikova, Fidesova, Vavrincikova, Miovsky, & Grund, 2016) suggests that many

<sup>1</sup> On March 30, 2016, this blanket ban on legal highs was postponed over concerns that the law is not enforceable, because its current definition of a psychoactive substance is expected to cause problems in ensuring successful convictions (Travis, 2016).



people buying iDrugs simply move on to sites hosted elsewhere or to the Deep Web. Both developments have relevance for the epidemiology of NPS, synthetic stimulants in particular, and their diffusion into vulnerable populations.

An important lesson from our study is that legislative instruments and law enforcement responses towards NPS clearly offer no panacea to the drastic shifts in drug markets and drug consumption patterns currently witnessed. They may result in unanticipated and undesirable consequences (Merton, 1936), such as their move into illegal markets and subsequent diffusion among those most vulnerable to their potential for harm. Likewise, whereas many smart shops provided their clients with at least some information on the drugs they sold, after their prohibition and the subsequent move of NPS into completely unregulated – offline and online – markets, opportunities to inform oneself about a new substance at the point of sale were drastically reduced. For both consumers and harm reduction services this complicated acquiring information about the substances on sale and consumed. While information about most drugs can of course be found online, PUDH are more likely to buy NPS in traditional dealing structures and they may not have access to internet or the interest to actively search for drug information online.

Traditional drug policy responses developed in reaction to scheduled drugs, such as heroin, cocaine or amphetamine are unlikely to contribute to the EU goals of containing (high risk) drug use and drug related harms. An overreliance on these 20<sup>th</sup> century strategies may even reverse the health gains of harm reduction policies implemented in EU member states.

Indeed, our results suggest that scheduling NPS contributed to their penetration into populations of PUDH and vulnerable youth. Scheduling substances furthermore contributes to the high rate at which new substances and branded blends of chemicals enter the market – *squeezing seems to further inflate the balloon*. Often neither consumers, nor harm reduction services have a clue of what the newest pill or powder on the block actually is or what the effects and potential harms are. This complicates both efforts at self-regulation and the development of tailored harm reduction strategies.

Once signed into law it often takes many years to reverse harmful legislation. Former Polish President and member of the Global Commission on Drugs, Alexander Kwasniewski, has repeatedly stated that he was not aware of the negative consequences when signing “*one of Europe’s most conservative laws on drug possession*” in 2000, in particular the criminalization of those it meant to protect, Polish youth, as the law resulted in over a tenfold increase in the number of prosecutions for drug possession – from 2,815 in 2000 to 30,548 in 2008. (Kwasniewski, 2012). Only in 2011 the law was amended to protect (young) people from prosecution for possession of small drug amounts for personal use. Other ‘ex-president’ members of the Global Commission have equally noted they had not anticipated the negative consequences of tough drug policies implemented when still in office. We suggest that the rapid cycling of NPS and the capricious nature of iDrugs, or more in general, the rapid structural changes in the landscape of intoxication come with important risks to effective policy making.

Studies published as early as 1976 (Westermeyer, 1976) show that drug policies are particularly sensitive to such “unanticipated consequences of purposive social action” (Merton, 1936). The odds of unanticipated consequences are bound to increase as current (DeLoache et al., 2015; Fossati, Narcross, Ekins, Falguyret, & Martin, 2015; Galanie, Thodey, Trenchard, Filsinger Interrante, & Smolke, 2015; Zirpel, Stehle, & Kayser, 2015) and near future (Grund, 2015) technological innovations in drug chemistry and distribution find their way into the drug markets. Thus, drug policy making in Europe is perhaps not necessarily in need of more and stricter drug policy instruments, but may significantly benefit from smarter and more flexible instruments, including safety safeguard’ provisions that allow for remedying policies that do more harm than good.

***A safeguard against unanticipated consequences***  
*A “Sunset Clause,” stipulates that new legislation has an expiry date once passed into law, unless further legislative action is taken to extend the law. A Sunset provision, e.g. known in British and US law, necessitates regular legislative oversight, review and evaluation of legislation and public policies (Myers, 2008). We think that such checks & balances could increase the efficiency of drug policy making and timely remediate potential negative side effects of public policies.*

## **Lesson 6. Countries should not merely invest in ‘Yesterday’s drug epidemics’ but look forward**

In several EU countries harm reduction services lack the funding and resources for targeting NPS use in existing service users or in vulnerable populations not in contact with services. All partners report a serious lack of financial resources allocated to harm reduction in general and NPS harm reduction in particular. This complicates both training and retaining qualified staff, as well provision of effective harm reduction services. National governments need to realize that drugs will never be the same. Member states should support and sufficiently fund the updating of harm reduction, prevention and treatment services to the demands of the 21<sup>st</sup> century landscape of intoxication.



## Recommendations for intervention and policy development

Recommendation 1. Member states and the EU should increase their efforts at monitoring the use of NPS, in particular in PUDH and other populations vulnerable to High Risk Drug Use, with particular foci on (drugs & sex) risk factors for blood borne disease transmission, overdose and mental health problems.

Recommendation 2. Member states should not only monitoring prevalence of NPS and trends in iDrugs, but also to carefully monitor and evaluate interventions that aim to affect NPS consumption and sales, whether these concern public health or legislative and law enforcement instruments.

Recommendation 3. EU member states should use legislative instruments and law enforcement responses towards NPS prudently and with restraint. They should consider including checks & balances into future drug legislation, such as a “Sunset Clause” in order to timely correct faulty legislation that leads to unintended or undesirable consequences.

Recommendation 4. Member states should developing appropriate harm reduction responses to emerging patterns of high risk stimulant use and the physical and mental health consequences associated therewith. Harm reduction and BBV prevention measures should be adjusted to the realities of new synthetic stimulants in both traditional PUDH populations and among vulnerable youth.

Recommendation 5. Overdose prevention measures should be fortified, widening the current focus on heroin to include:

- Depressants, including diverted pharmaceutical and new synthetic opioids (such as MT45 and octafentanyl, both recently notified to the EWS) and GHB: and,
- Emerging patterns of combination use of NPS and traditional opioid drugs, such as heroin and methadone.

Recommendation 6. OST should be scaled up where needed according to UN standards and based on local needs assessments. OST services should be required to implement and adhere to transparent, evidence-based, humane and non-discriminatory treatment standards and protocols. Punitive drug testing and sanctions that interfere with treatment participation and the client-provider relationship should be strongly discouraged. OST services should be regularly monitored, report their performance and the clients’ satisfaction therewith. OST should be treated as any other pharmacologically assisted treatment and thus held to equivalent standards of quality and equity.

Recommendation 7. States should facilitate quality harm reduction services through short lines between science and practice and timely and regularly exchange of relevant information at interdisciplinary meetings and conferences. Researchers should publish their work in clear and understandable language. Drug service organisations should provide their staff with ongoing and integral training and invest in capacity building among harm reduction workers and peers.

Recommendation 8. Novel harm reduction approaches to high risk and dependent use of NPS should be explored, including drug substitution strategies for drugs of dependence other than opioids.

Recommendation 9. There is an important need to experiment and pilot new approaches that suit the new drugs. Cooperation between the various stakeholders involved – harm reduction services, public health departments, emergency rooms, club owners, police and, last but not least (online) NPS using communities. Peer involvement should be promoted and implemented widely to share information about newest trends and promote 'safer use' among NPS users.

Recommendation 10. Harm reduction services should also take their efforts online, interact with virtual drug using communities and support peer-based sharing of NPS information and harm reduction skills that can empower consumers to avoid and reduce associated harms.

Recommendation 11. Drug services employers must take occupational safety measures that guarantee the safest working environment for their staff possible.

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