

## Novel Psychoactive Substances & New Drug-taking Trends

Dr Paolo Deluca, PhD & Dr Andreas Kimergard, PhD Institute of Psychiatry, Psychology & Neuroscience King's College London

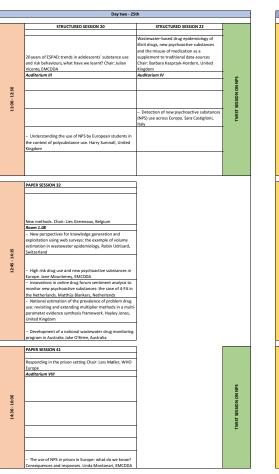


2-Methylamino-1-p-tolylpropan-1-on Not for human consumption.





	Day one - 24th	
	STRUCTURED SESSION 2	
11:30 - 13:00	Early warning for new psychoactive substances (NPS) Chair: David Wood, United Eingdom and Ann Gallegos, EMCDDA Auditorium V	TWIST SESSION ON NEW MONITORING TOOLS
	<ul> <li>The value of early warning: Carfentanil - a case study. Helgi Danielsson, EMCDDA</li> </ul>	
	PAPER SESSION 7	
13:15 - 14:15	New psychoactive substances (NPS)-a challenge for responses. Chair: Michal Micoský, Czech Republic AutBrothm H – The German new psychoactive substance law (NPSG): perceived and expected outcomes in the first stage of implementation. Tesus-Virginia teamenana, Germany New psychoactive substances: current health-related practices and	
	challenges in responding to use and harms in Europe. Alessandro Pirona, EMCDDA – Responses to the problem of Tegal highs' in Poland and their consequences. Krypstof Krajewski, Poland	
	PAPER SESSION 18	
14:30 - 16:00	New psychoactive substances - trends and developments. Chair: Paul Dargan, United Kingdom Room SA	
	New psychaactive substance use among regular psychostimulant usern in Australia, 2010-2017. Asch4 Satherland, Australia New trends in drug use in Germany? The use of new psychaactive substance: and metamphetamine in the Hearl states. It can Gornes der Mötst, Germäny Mana Metamoten (MPG) in Portugal – rends and approaches. Sama Metamoten (MPG) in Poland – sittludes and behaviors. Tomasz Balase, Poland	
	- French media and new psychoactive substances: is a new discourse	



Day three - 26th						
11:00-12:30	PAPER SESSION 43					
	Illuminating the darknet and online markets - Chair TBC Auditorium I - Forensic drug intelligence and the rise of darknet marketplaces. Marie Morelato, Australia					
	<ul> <li>Four years of monitoring cryptomarkets on the darknet. Amanda Roxburgh, Australia</li> </ul>					
	<ul> <li>"This place is like the jungle". Discussion about NPS on a cryptomarket. Sara Rolando, Italy</li> </ul>					
	<ul> <li>Purity, adulteration and price of drugs bought on- line versus off-line in the Netherlands. Peggy van der Pol, Netherlands</li> </ul>					
	<ul> <li>The role of the 'dark web' in the trade of illicit drugs and the role of the Netherlands on these marketplaces. Kristy Kruithof, United Kingdom</li> </ul>					
	STRUCTURED SESSION 41					
12:45 - 14:15	Anonymeus callecting and testing of new psychoactive substances samples as a part of national early aversing systems (PWS), Chair: SimonaSabić, Slovenia <b>Room 1.09</b> – Anonymous collection and testing of NPS samples as a part of national EVS: challenges and advantages. Anoregis Devs, Slovenia – Isabilitational EVS: challenges and advantages. Anoregis Devs, Slovenia – Isabilitational EVS system in the framework of ISEE project. Ada Neckeur Grom, Slovenia migrature of ISEE project. Ada Neckeur Grom, Slovenia migrature of ISEE project. Ada Neckeur Grom, Slovenia Slovenia					
	PAPER SESSION 54	PAPER SESSION 56				
	FAFER JEJJIUN 34	FAFER JEJSIUN 38				
	Innovative methods in drug detection. Chair: Félix Carvalho, Portugal Room 5A - The European drug emergencies network (Euro-	Innovation in harm reduction Chair: tbc Auditorium II				
	<ul> <li>The European aruge emergencies network (Euro- DEN) project – a model for European data collection on acute drug and new psychoactive substance (NPS) toxicity. Paul Dargan, United Kingdom</li> </ul>					
		<ul> <li>Chemsex, NPS and risk reduction management: preliminary results of a pilot study. Cécile Chevallier, France</li> </ul>				

### NPS session - Structure

 30 min – Overview on NPS (Prevalence, Policy Implications, Enforcement, and Treatment)

• 30 min – Small groups discussion

• 30 min – General discussion

### Background

- Psychonaut 2002 (2002-2004)
- Psychonaut EWS (2008-2010)
- ReDNet (2009-2012)
- ALICE RAP (2011-2016)
- CODEMISUSED (2014-2016)
- CASSANDRA (2015-2017) Computer Assisted Solutions for Studying the Availability aNd Distribution of novel psychoActive substances http://www.projectcassandra.eu

### Definition

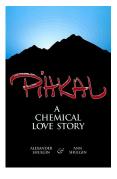
- UNODC: "substances of abuse, either in a pure form or a preparation, that are not controlled by the 1961 Single Convention on Narcotic Drugs or the 1971 Convention on Psychotropic Substances, but which may pose a public health threat"
- These include for example, Mephedrone, Spice, GBL, MDAI, Benzo Fury and Salvia divinorum, that are, or were when they emerged, not controlled by relevant drug legislation.
- Also known as "Legal Highs"



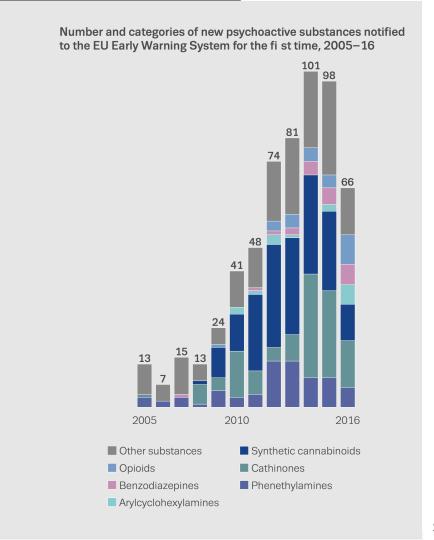
# The phenomenon



- No new phenomenon, but increased availability and Internet are changing the face of the drug scene.
- MDMA, GHB, BZP, Salvia Divinorum, Magic Mushrooms
- In 1975 Shulgin, current drugs will be replaced with substitute compounds, which will provide society with new, unknown, and unmanageable substances.
- International
- Prevalently marketed and sold online as not for human consumption, plant feeder, pond cleaner, incense.







Source: EMCDDA 2017

### **NPS - Classification**

Chemical structure:

- Phenethylamines
- Piperazines
- Cathinones
- Tryptamines
- Synthetic cannabinoids/alkylindoles (eg JWH... HU or AM..)
- Arylcyclohexylamines

Pharmacological and clinical effects

- Stimulant
- Entactogenic
- Hallucinogenic
- Anaesthetic
- Dissociative
- Depressant

### What we know

- Very little!
- When a new product emerges there is no or almost no data in relation to their pharmacology, chemistry, toxicology or safety assessments.
- Forums, social media, Erowid, early experimenters
- Ad hoc surveys
- Animal/pre clinical and clinical studies will follow.

### Prevalence of use



### The size of the problem

- General population surveys British Crime Survey added some NPS eg Spice in 2009, and Mephedrone 2010...nitrous oxide and salvia in 2012/13
  - Last year use prevalence of 1.1% mephedrone in 2011/12 down from 1.4%, no change in 2013/2014
  - 4.4% in 16-24 yr-olds
  - Fourth most popular, after Cannabis (6.9%), Cocaine (2.2%), and Ecstasy (1.4%)
  - Other NPSs at 0.1%, and Spice at 0.2%
  - 2.3% Nitrous Oxide and 0.5% Salvia in 2013/14 (16-59, higher in 16-24)
  - Mephedrone top ten drugs of misuse for telephone enquires in TOXBASE in 2013/14 (National Poisons Information Service)
- Mixmag/GDS 41% in 2009, 51% in 2010, 20% in 2011, 7.9% in 2013
- Club surveys 41% in 2011

# The size of the problem (2)

- Treatment demand data
  - NTA/NDTMS No separate entry for NPS on the database in previous years. Mephedrone: 1400 in 2013. 3000 in 2015 (1% of those in treatment).
  - All NPS: 1154 in 2015, 1500 in 2016
  - ~ ≈900 individuals presenting to treatment for mephedrone in 2011/12 at the Club Drug Clinic
  - A&E presentations, but UK data not available
- Mortality data (from npSAD and ONS)
  - Relatively low numbers of deaths where NPSs have been mentioned. Eg only two where only mephedrone was mentioned (2011), 1 in 2012
  - 86 reported the presence of mephedrone was mentioned (2011), 13 in 2012.
- Any NPS: 31 (2011), 55 (2012), 63 (2013), 82 (2014), 114 (2015)
- Any Drug: 3674 (2015), increasing year on year (e.g. 2652 in 2011).
- NPSs availability: Online, headshops, festivals, friends, drug dealers

# Policy implications



## Policy implications

- Catching up with new compounds
- Consumer safety legislation
- Food safety legislation
- Medicinal product legislation
- Germany Medicinal products Challenged by ECJ in 2014
- Poland Blanked approach (2010) via health protection law
- Ireland Blanked ban (2014)
- New Zealand PSA 2013 Blanket ban
- UK NPS and actions to tackle their use were part of the 2010 Drug Strategy.
  - 1. 2011 Creation of Temporary Class Drug Order
  - 2. 2016 Psychoactive Substances Act

### Temporary Class Drug Order (TCDO)

A TCDO can be placed on a drug if the drug is not already controlled under the Misuse of Drugs Act (as a Class A, B or C); and the Home Secretary has received a recommendation from the Advisory Council of the Misuse of Drugs that the order should be made, on the basis that:

a. the drug is being, or is likely to be, misused ; andb. misuse is having, or is capable of having, harmful effects.

A TCDO will come into immediate effect and last for up to 12 months

A TCDO will hold the same offences as those under the Misuse of Drugs Act with the exception of the possession offence.

### Psychoactive Substances Act 2016

The 2016 Act makes it an offence to: produce; supply; offer to supply; possess with intent to supply; import or export a psychoactive substance.

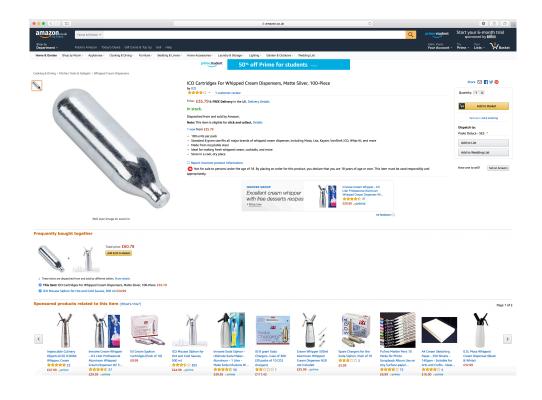
A psychoactive substance is a substance which is capable of producing a psychoactive effect in a person who consumes it and is not an exempted substance. A person consumes a substance if the person causes or allows the substance, or fumes given off by the substance, to enter the person's body in any way.

Exempted substances include:

- a) Controlled drugs (within the meaning of the Misuse of Drugs Act 1971);
- b) Medicinal products;
- c) Alcohol;
- d) Nicotine and tobacco products;
- e) Caffeine; and
- f) Food

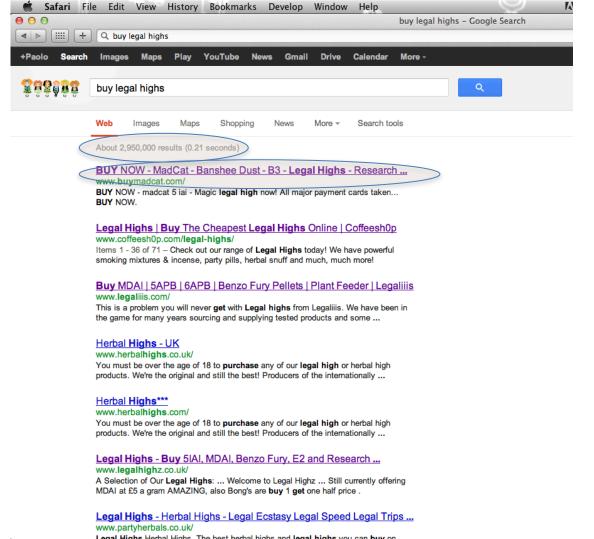
In place since 26<sup>th</sup> May 2016

### Nitrous Oxide (N<sub>2</sub>O)



### Enforcement

Legal vs illegal substances Distribution/supply Drug testing and identification The challenges of online markets



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### Mad Cat 1g bags PLEASE NOTE- out of stock right now - back in stock very soon

### Name: Mad Cat

Also Know as: Green CAT, The Dog's CAT, Mad-Cat, Madcat.

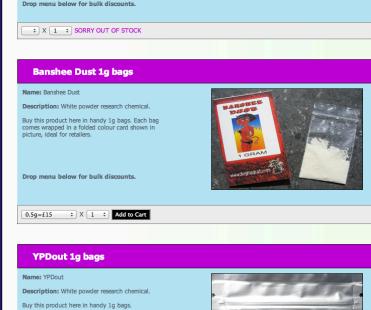
Please Note - This substance is NOT Mephedrone / MCAT / 4MMC

Please note- madcat does vary in colour from batch to batch, it goes from yellow to green and even blue.

Buy this product here in handy 1g bags. Each bag comes wrapped in a folded colour card shown in picture, ideal for retailers.

This Product is Hazardous and Not for Human Consumption!







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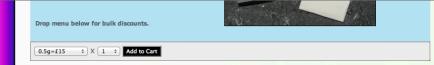
### Alchemy 1g bags

### Name: Alchemy

**Description:** White powder stimulant with numbing effect. Contains no substances which are banned in the U.K..

Buy this product here in handy 1g bags. Each bag comes wrapped in a folded colour card shown in





### Sily Walk 1g bags

### Name: Silly Walk

**Description:** very strong, very mad! Contains no substances which are banned in the U.K..

Buy this product here in handy 1g bags. Each bag comes wrapped in a folded colour card shown in picture, ideal for retailers.



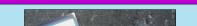
Drop menu below for bulk discounts.

### 0.5g=f15 + X 1 + Add to Cart



### Benzo Fury 1g bags

Name: Benzo Fury / (6-APB)



Also Know as: 1-benzofuran-6-ylpropan-2-amine.

Description: 6-APB is currently Legal in the UK.

Buy this product here in handy 1g bags. Each bag comes wrapped in a folded colour card shown in picture, ideal for retailers.



Drop menu below for bulk discounts.

1g=£25.00 + X 1 + SORRY OUT OF STOCK

### Chang 1g bags

### Name: Chang

Description: White powder research chemical.

Buy this product here in handy 1g bags. Each bag comes wrapped in a folded colour card shown in picture, ideal for retailers.





1g=£25.00 ‡ X 1 ‡ SORRY OUT OF STOCK

### Poke 1g bags

### Name: Poke

Description: White powder research chemical.

Buy this product here in handy 1g bags.









### Sectioned 1g Bags

### Name: Sectioned

Description: Purple powder research chemical.

Buy this product here in handy 1g bags. Each bag comes wrapped in a folded colour card shown in picture, ideal for retailers.



SECTIONED

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### 0.5g=f15 \$ X 1 \$ SORRY OUT OF STOCK

### Rush 1g bags

### Name: Rush

Description: White powder research chemical.

Buy this product here in handy 1g bags.



Drop menu below for bulk discounts.

### WTF! 1g bags

### Name: W.T.F!

Description: white crystal research chemical.

Buy this product here in handy 1g bags. Each bag comes wrapped in a folded colour card shown in picture, ideal for retailers.

Drop menu below for bulk discounts.



0.5g=f12 + X 1 + Add to Cart

### 5 APB 1g bags

### Name: 5 APB

Description: 5-APB Direct From Europes Best Source of 5-APB

Tan Powder Form, 30% Stronger than 6-APB Only 100mg Enough For One Lab Test

5-APB is variant of the research chemical 5-APDB developed in the 1990s by David E. Nichols whilst investigating non-neurotoxic MDMA analogues.

Buy this product here in handy 1g bags. Each bag comes wrapped in a folded colour card shown in picture, ideal for retailers.

### Drop menu below for bulk discounts.

0.5g=f20 + X 1 + SORRY OUT OF STOCK

### Cogaine 1g bags

### Name: Cogaine

Description: White powder research chemical.

Buy this product here in handy 1g bags.





### Dusk Till Dawn 1g bags

Name: Dusk Till Dawn

Description: White powder research chemical.

Buy this product here in handy 1g bags.



Drop menu below for bulk discounts.

1g=f25.00 + X 1 + Add to Cart



### Blow 1g bags

### Name: Blow

Description: White powder research chemical.

Buy this product here in handy 1g bags.



### 5-MAPB Pellets

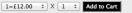
### Name: 5-MAPB Pellets

Also Know as: 1-(2-benzofuran-5-yl)-N-methylpropan-2-amine

5-MAPB is a new compound from the benzofuran family.

It is the N-methyl analogue of 5-APB and provides a fertile ground for new laboratory research into the 2-alkylaminobenzofurans.

Drop menu below for bulk discounts.



### 5 IAI 1g bags

### Name: 5 IAI

Also Know as: 5-Iodo-2-aminoindane.

Description: White powder stimulant which acts as a releasing agent of serotonin, norepinephrine, and dopamine. It was developed in the 1990s by a team led by David E. Nichols at Purdue University. 5-NAI fully substitutes for MDMA in rodents and is a putative entactogen in humans. Contains no substances which are banned in the U.K..

Buy this product here in handy 1g bags. Each bag comes wrapped in a folded colour card shown in picture, ideal for retailers.

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### MDAI 1g bags

Name: MDAI (5,6-Methylenedioxy-2-aminoindane)

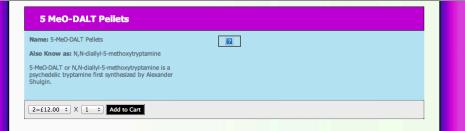
Description: MDAI is a drug developed in the 1990s by a team led by David E. Nichols at Purdue University. It acts as a non-neurotoxic and highly selective serotonin releasing agent (SSRA) in vitro and produces entactogen effects in rats.

Buy this product here in handy 1g bags. Each bag comes wrapped in a folded colour card shown in picture, ideal for retailers.









### Mumbo Jumbo Incense 1g bags

Name: Mumbo Jumbo incense

This Product is Hazardous and Not for Human Consumption!



Drop menu below for bulk discounts.

1g=f10.00 + X 1 + Add to Cart

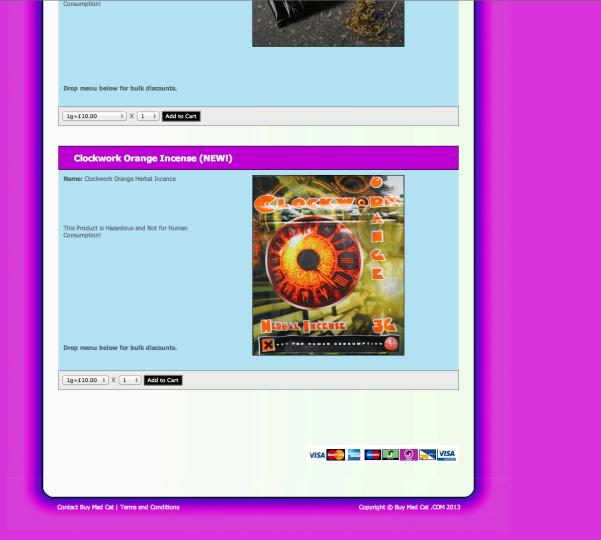
### **Chronic Haze incense**

### Name: CHRONIC HAZE incense

Also Know as: CHRONIC HAZE incense has been in development for over 6 months, the final product is finished and on sale today The blend is highly sought after and is legal in all countries

This Product is Hazardous and Not for Human Consumption!











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### **First Class Customer Service**

Our customer services team are second to none in the industry. We get many compliments on the helpfulness of our staff and we are always happy to answer any sensible questions you may have. Please note we can not send out free samples simply due to the huge demand but we can send a small sample with an order if requested. We attempt to answer all queries within 3 hours but this can often be quicker.

### Speedy Worldwide Delivery

We export our products all over the world but we do stress that it is your responsibility to check your local legislation in regards to the legality of our Research Chemicals as it is very hard for us to stay on top of the ever changing laws governing each country. There are certain countries we do not ship to such as the USA, Canada, Australia & New Zealand. Delivery around the EU takes around 5-10 working days depending on the delivery method you select. Delivery outside the EU takes 7-14 days again depending on the delivery method selected. We use Roval Mail as standard and all orders can be tracked on the Roval Mail website. We can replace orders which go missing in the post but cannot replace those confiscated by customs.

### Caution Hazardous Chemicals

We withhold the right to refuse sale of any of our research chemicals to any customer attempting to buy Benzo Fury, 5-Meo-Dalt, Pyrazolam, Etizolam, Methiopropamine, AMT or any other of our products if we even have the slightest inclination that they may be misusing them. Before purchasing any research chemical please ensure you have access to capable apparatus to handle and carry out experiments with hazardous chemicals. Always adhere to standard lab practices: avoid contact with skin and eves. If any research chemical is ingested for any reason, seek medical advice immidiately.



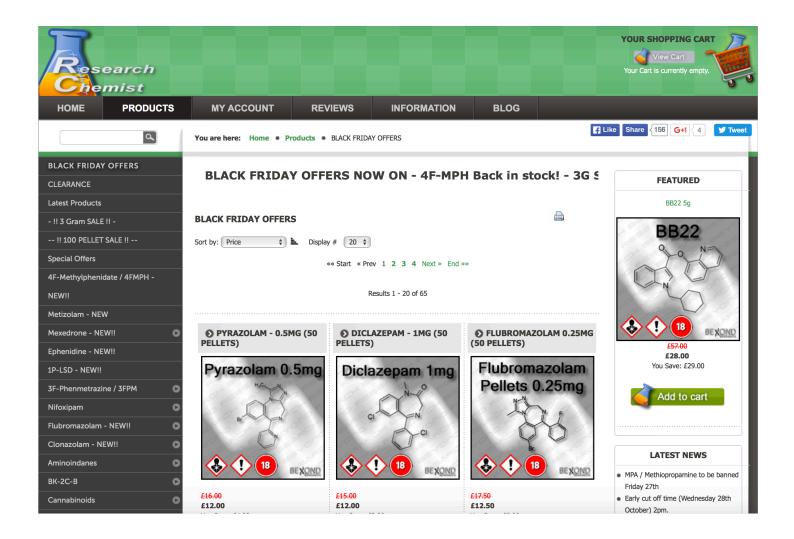
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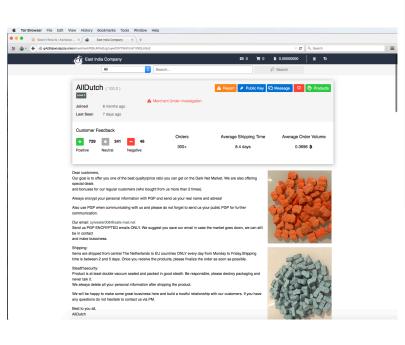


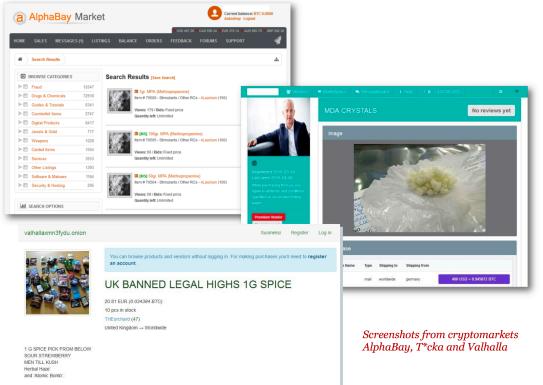




### Market changes...







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# Cryptomarkets

	Oct 2015	Dec 2015	Feb 2016	Apr 2016		
ALL NPS						
Cryptomarket leader (no. of vendors selling NPS)	Abraxas (88)	Nucleus (84)	AlphaBay (96)	AlphaBay (122)		
Total no. of vendors selling NPS	212	214	233	256		
Total no. of unique NPS advertised	94	119	158	161		
Total no. of vendors selling NPS alone or with prescription drugs	107	98	88	108		
Total no. of NPS listings	759	840	958	1187		
Leading NPS category	Phenethylamines	Cathinones	Phenethylamines	Cathinones		
UNCONTROLLED	(% of total number of NPS)					
Total no. of uncontrolled NPS sold	26 (27.7)	37 (31.1)	46 (29.1)	45 (28)		
Total no. of uncontrolled NPS listings	142 (18.9)	185 (22.0)	243 (25.4)	303 (25.5)		
Leading uncontrolled NPS category	Synthetic cannabinoids	Synthetic cannabinoids	Synthetic cannabinoids	Synthetic cannabinoids		

### **Online purchases**

- Online market growing, but difficult to estimate.
  - Psychoanut 2002 -> 90 online vendors
  - EMCDDA in 2012 identified 690 online shops (170 in 2010)
  - Dark web Silk Road, Black Market Reloaded etc.
- Global Drug Survey 2015 shows more people buying online than ever before, 1 in 10 with 25.3% having done so for the first time in the past year (2014).
- British Crime Survey (2014), Only 1% of adults who had used drugs in the last 12 months sourced the last drugs they took from the Internet

### Treatment





Scottish Government Riaghaltas na h-Alba gov.scot

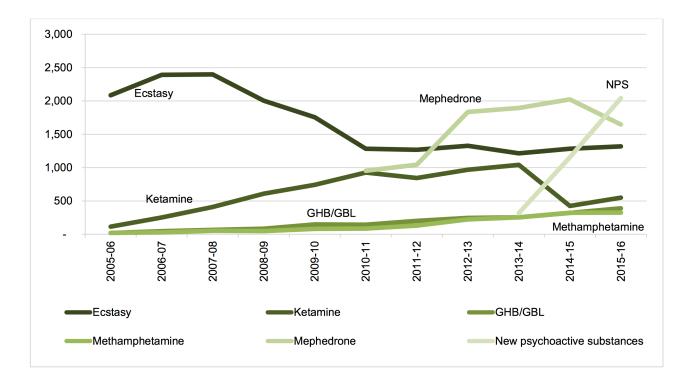
### Drug misuse and dependence

UK guidelines on clinical management

# Key points

- It is important that drug services maintain a broad competence in the use of club drugs and new psychoactive substances (NPS).
- Drug services need to consider their competencies in working with relevant diverse cultures and in attracting those affected (e.g. younger people and some in the LGBT community).
- Regular updating of staff knowledge is required particularly concerning new acute or chronic harms.
- Closer working and joint training with acute and emergency departments and sexual health services, where individuals with such problems may present, can be appropriate for some drug services or staff.

### **Treatment access**



Source: NDTMS 2017

### **Clinical management**

- NPS drugs are, however, essentially simply variants of the established psychoactive drug types (stimulants, depressants, hallucinogens/psychedelics) or of other known drug types such as dissociative anaesthetics.
- Treatment interventions for the management of dependence on NPS are essentially the same as for any other problem substances, using psychosocial interventions (and pharmacological support if appropriate)

### Acute management

- Often identity of NPS is unknown
- In most cases of intoxication patients be discharged from A&E after a short period dedicated to observation, monitoring, supportive care and symptomatic treatment.
- Benzodiazepines are indicated as the best way of controlling psychomotor agitation, aggression, anxiety, seizures.
- Antipsychotics are a possible alternative in combating agitation, psychosis and hallucinations.
- Anti-emetics may be considered for nausea and vomiting

## Small groups discussion

- 1. Prevalence of use/reasons of use
  - There are many different NPS on the market discuss the difficulties that may be encountered when assessing the risks to users.
- 2. Policy implications
  - Should NPS be controlled under new 'NPS legislation', under existing drug laws or controlled at all?
- 3. Enforcement
  - The emergence of NPS is a global phenomenon discuss how national and international law enforcement agencies can address the manufacturing and supply of these drugs.
- 4. Treatment options & Prevention strategies
  - Discuss how existing types of treatment, prevention and harm reduction drug interventions can be applied to users of NPS. Is this what users want?

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