

## WEDINOS Headlines

TOTAL number of samples received by WEDINOS October 2013 to March 2017

**6,678**  
Samples received

**5,460**  
Samples analysed

**1,090**  
Samples rejected

**357**  
Substances identified in either combination or isolation

This quarter  
(April 2017 to June (9th) 2017)

**226**  
Samples received

**157**  
Samples analysed

**21**  
Samples rejected

**53**  
Substances identified in either combination or isolation

- Five synthetic cannabinoid receptor agonists
- Five designer benzodiazepines

The WEDINOS project has been designed for the collection and testing of substances and, most importantly, dissemination via [www.wedinos.org](http://www.wedinos.org) of pragmatic evidence based harm reduction information for users. WEDINOS aims to go beyond identification of novel substances, to address the harms associated with use of New Psychoactive Substances (NPS), new combinations of established drugs and NPS and Image and Performance Enhancing Drugs (IPEs). For more information on IPEs please visit:

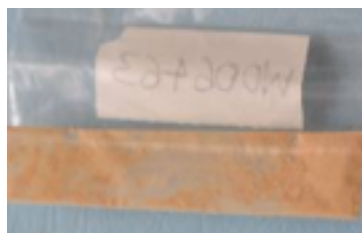
[www.ipedinform.co.uk](http://www.ipedinform.co.uk)

Please note that figures for this quarterly report include samples submitted and analysed up to and including 9th June 2017. This was due to a combination of essential maintenance to the WEDINOS analytical tools and a review of the programme risk assessment.

## Fentanyl / Fentanyl type-substances / Synthetic Opioids



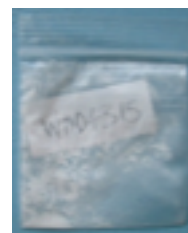
Carfentanyl and mannitol



Heroin, noscapine and furanylfentanyl



Thiofentanyl



Acetylfentanyl



Ocfentanil, paracetamol and caffeine

Due to recent fatalities in North England and media attention Fentanyl and Fentanyl type-substances are very topical at this time.

Synthetic opioids are man-made substances that have been manufactured to mimic the effects of natural opioids including opium. This category of substances includes prescription only medicines (POMs) including fentanyl and pethidine (fentanyl and pethidine are also controlled by the Misuse of Drugs Act 1971 as a Class A substance), and NPS including AH-7291 and MT-45 which have very little history of use and no evidenced medicinal uses.

The emergence of the fentanyls on the illicit drug market in the European Union dates back to occasional reports from the mid-1990s. There was a case report of a death in Italy in 1992 that details an overdose from fentanyl-cocaine use. This appears to be the first detection of fentanyl on the illicit market in the EU<sup>1</sup>.

Although, the use of fentanyls has been reported across Europe, use predominates in Eastern European countries where a substantial rise in fentanyl use is seen during periods where heroin had been in short supply e.g. Bulgaria (2010/11) and Slovakia (2011). In 2012, there was evidence of localised fentanyl use and fentanyl-related deaths amongst opioid users in Sweden, Finland and Germany. In Estonia, fentanyl use has been described as endemic in the injecting drug use population, with fentanyls becoming the most used opioid since 2000.

1. Ferrara, S. D., Snenghi, R. and Tedeschi, L. (1994), 'Fatality due to fentanyl-cocaine intoxication resulting in a fall', International Journal of Legal Medicine, 106(5), pp. 271-3.

**Fentanyl / Fentanyl type-substances / Synthetic Opioids ...continued from Page 1.**

To date WEDINOS has received and analysed 22 samples that were found to contain fentanyl's, identifying 6 substances.

- Fentanyl – Described as 100 times more potent than morphine and 50 times more potent than heroin. This increased potency would also result in an increase in the potential for harms and the risk of overdose.
- Ocfentanil - More potent than heroin, it has similar effects to fentanyl producing strong analgesia and sedation. However, it is slightly more potent than fentanyl, with 3µg/kg of ocfentanil being equivalent to 5µg/kg of fentanyl
- Furanylfentanyl - subject to a July 2017 EMCDDA and EUROPOL joint report ([http://www.emcdda.europa.eu/system/files/publications/4682/JOINT\\_REPORT\\_furanylfentanyl\\_web.pdf](http://www.emcdda.europa.eu/system/files/publications/4682/JOINT_REPORT_furanylfentanyl_web.pdf))
- Carfentanyl - first synthesized in 1974, is 10,000 times more potent than morphine, making it one of the most potent known and the most potent commercially used opioids. It is used as a general anaesthetic agent for large animals.
- Acetyl fentanyl - Acetyl fentanyl is a potent synthetic opioid analgesic and is derivative of fentanyl. It is suggested that acetyl fentanyl is 5 to 15 times more potent than heroin<sup>2</sup>.
- Thiofentanyl – No medical use.



It is thought that naloxone will have the same reversal effect for fentanyl(s) as it does for fentanyl and other synthetic opioids, however due to its higher potency compared to heroin it may require a larger dose<sup>3</sup>.

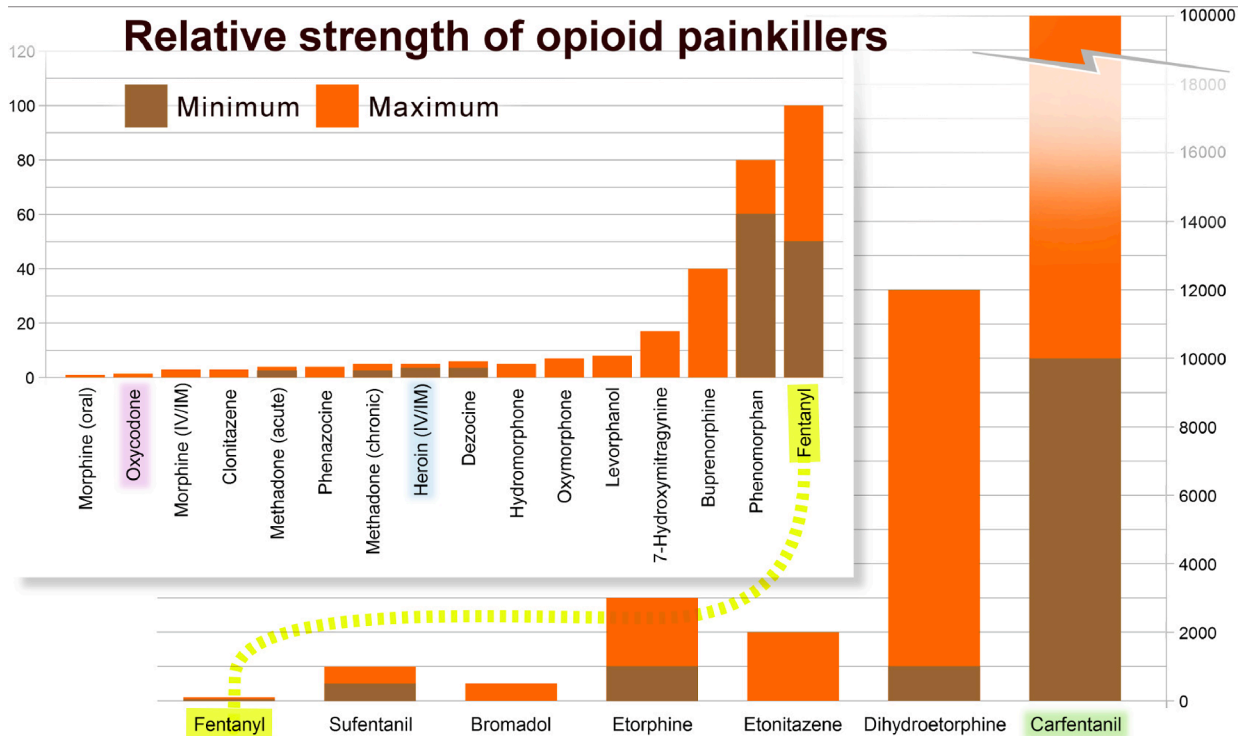
- Ensure you carry your Naloxone kit.
- Use in sight or in the company of others.
- If you are using alone, inform someone of your intentions.
- If you do use in a separate room, ensure the door is not blocked and can be easily opened.

A useful overdose information sheet is available for download via UK Drugwatch here:

[http://michaellinnell.org.uk/resources/downloads/DrugWatchOD\\_Emergency\\_1\\_0.pdf](http://michaellinnell.org.uk/resources/downloads/DrugWatchOD_Emergency_1_0.pdf)



2. Higashikawa Y and Suzuki S. (2008). Studies on 1-(2-phenethyl)-4-(Npropionylanilino) piperidine (fentanyl) and its related compounds: structure-analgesic activity relationship for fentanyl, methyl-substituted fentanyls and other analogues. *Forensic Toxicol* 26:pp.1-5.  
 3. Roberts JR. (2013). Acetyl fentanyl: new drug of abuse more common than assumed. *Emerg Med News* 35:1-28.



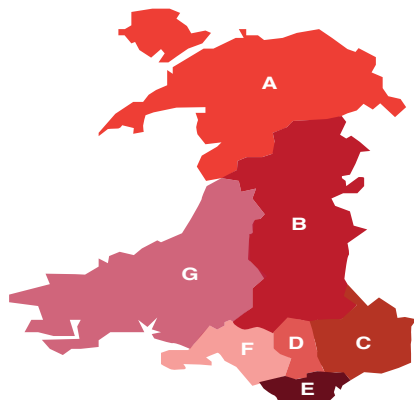
Homeless in Vancouver: Fentanyl overdoses are just the beginning - <http://www.straight.com/blogra/770691/homeless-vancouver-fentanyl-overdoses-are-just-beginning>

Potency varies amongst fentanyl analogues. As potency increases, so do the potential relative harms. As a result of this variance doses can also vary greatly. The greater the potency the lower / smaller the potentially harmful / fatal dose.

# FINDINGS...

## WHERE...

Samples were submitted from six of the seven Welsh Health Boards. No samples were received from Powys Teaching Health Board. Samples were received from Betsi Cadwaladr University Health Board following June 9th 2017.



### Breakdown of sample submissions by Health Board areas

- A** - Betsi Cadwaladr University Health Board – samples received post June 9th 2017.
- B** - Powys Teaching Health Board – 0 samples.
- C** - Aneurin Bevan University Health Board – 21 samples.
- D** - Cwm Taf University Health Board – 8 samples.
- E** - Cardiff & Vale University Health Board – 27 samples.
- F** - Abertawe Bro Morgannwg University Health Board – 49 samples.
- G** - Hywel Dda University Health Board – 10 samples.

26 samples were received from England, eight from Northern Ireland, five from Scotland and one from outside the United Kingdom. Three samples were submitted without any information relating to their origin.

**WEDINOS does not analyse samples received from outside of the United Kingdom.**

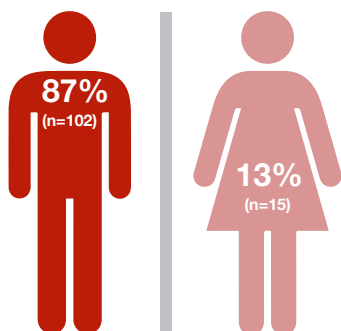
In relation to Welsh Health Board areas, the highest proportion of samples came from Abertawe Bro Morgannwg University Health Board, 49 samples were received and analysed, accounting for 31 per cent of all samples analysed.

## Psychoactive Substances

### Who...

Where a WEDINOS Effects Record was submitted and gender completed:

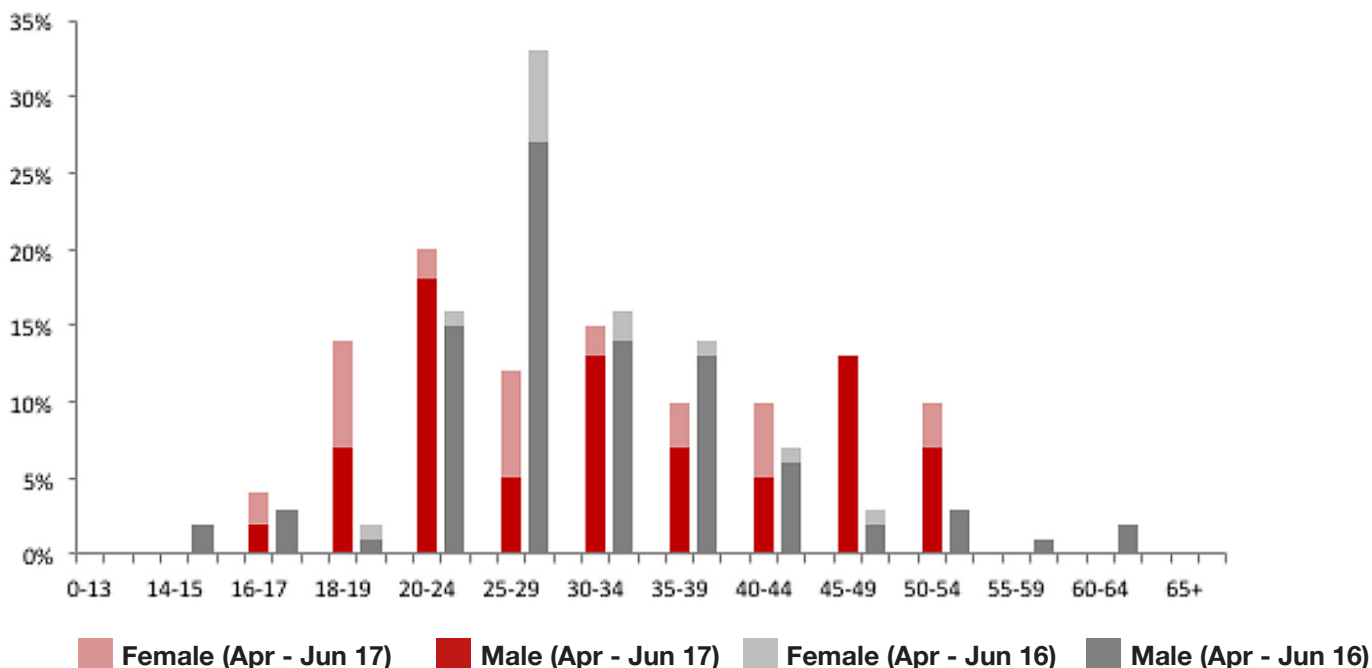
This is comparable to last quarter.



The median age for all mind altering / psychoactive sample providers (Wales and wider UK) was 30 years (average age was 33 years old); with an age range of 16-54 years. This represents an increase of 3 years on last quarter's average age, however, this has consistently been between 30 and 34 since project launch. We also have a smaller age range this quarter compared to 16 to 65 last quarter.

- Females - median age was 29 years and an average age of 31 years (range: 17-53)
- Males - median age was 30 years, with an average age of 33 years (range 17-54 years)

### Gender / Age profile of samples providers – Psychoactive Samples (This quarter compared to the same quarter last year)



## Reason for purchase All samples

155 Mind Altering / Psychoactive samples were submitted for analysis during this quarter. 2 samples of Image and Performance Enhancing Drugs (IPEDs) were submitted via Public Health Wales agreed sentinel.

## Samples Submitted from Wales

87 per cent of Welsh samples were submitted via 15 services / organisations; with the remaining 13 per cent being submitted anonymously; compared to 94 per cent submitted via 28 services / organisations and 6 per cent submitted anonymously last quarter.

## WHAT...

Of the 155 Mind Altering/Psychoactive samples:

- 23 samples were purchased in the belief that they were Class A substances
- 11 Class B
- 17 Class C
- 10 were believed to be controlled by the Psychoactive Substances Act 2016 (PSA 2016)
- 6 were believed not to be controlled
- A further 90 were submitted without any information relating to purchase intent, or perceived legal status. This number includes samples submitted by criminal justice services for trend analysis, that do not have any forensic or evidential values.

Post analysis we see that Class A increased from 23 samples to 37. Class B increased from 11 to 33, Class C increased from 17 to 27. The number of substances controlled by the PSA 2016 rose from 10 to 15. Substances that are not controlled increased from 6 to 40 (many of these substances were found to prescription only medications). Five samples remained unidentified. It must be noted that although the majority of groups increased with the post analysis categorisation of the "unknown" substances, several samples moved between classifications. Examples of this include:

### Sample believed to be....

#### Six samples submitted as Diazepam

Diazepam  
MDMA

N-Ethyl-Hexedrone  
Ketamine

Methylphenidate (Ritalin)

Gabapentin

### Found to contain...

Etizolam (Similar finds last quarter)  
Zolpidem

Ephylone (Similar finds last quarter)

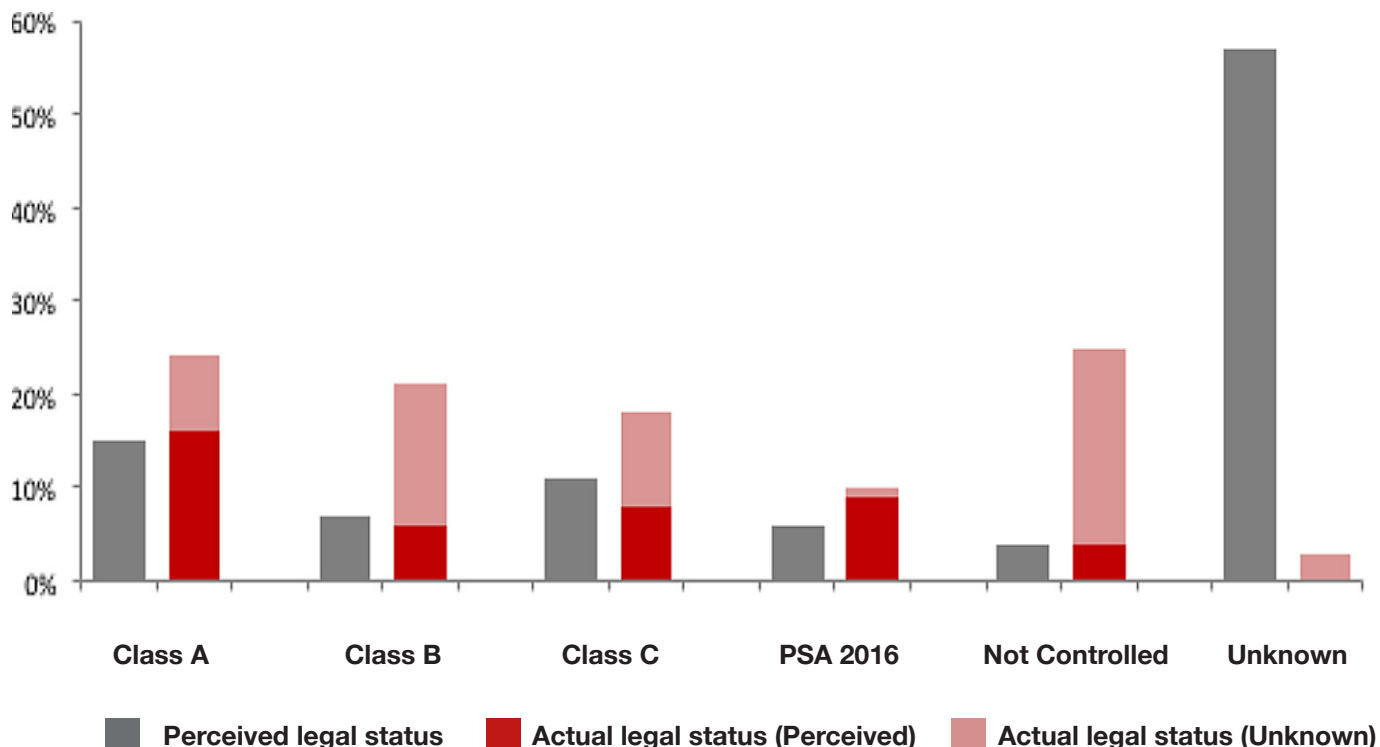
Cocaine  
Cocaine

Modafinil (Similar finds last quarter)

Alprozolam (Xanax)

**Reminder as of Monday 4th April 2016: WEDINOS stopped analysing individual samples that, on the effects sheet only provide details of purchase intent stated as 'legal high' or 'research chemicals'. It is an important element of WEDINOS that we are able to provide information both on what individuals intended to purchase and the actual content of the sample substance. When submitting a sample, please ensure that you include as much information as possible around what you intended to buy on the sample and effects record as well as effects experienced if the sample was consumed. If the sample was not consumed include your reason for submission. Many thanks.**

## Proportion of controlled and not controlled / legal – Perceived and Actual (Psychoactive Substances)



NB. Following analysis samples were categorised based on the highest classified substance present. Order of classification / control – Class A, B, C, Temporary Class Drugs Order, Controlled under the PSA 2016, Not controlled.

## Most commonly identified substances in all Mind Altering / Psychoactive Substance samples.

The table below shows most commonly identified psychoactive substances this quarter compared to the previous quarter (Jan-Mar 2017).

Top 10	Apr-Jun 17	Jan - Mar 17
Number 1	<b>Cannabis / Diazepam</b>	<b>Cocaine</b>
Number 2		<b>MDMA</b>
Number 3	<b>Cocaine</b>	<b>Diazepam</b>
Number 4	<b>Caffeine</b>	<b>Levamisole</b>
Number 5	<b>Nicotine</b>	<b>Buprenorphine</b>
Number 6	<b>No Active Component Identified</b>	<b>Cannabis</b>
Number 7	<b>MDMA</b>	<b>No Active Component Identified</b>
Number 8	<b>Mannitol</b>	<b>Benzocaine</b>
Number 9	<b>Amphetamine</b>	<b>Caffeine</b>
Number 10	<b>Etizolam</b>	<b>AMB-FUBINACA</b>

■ Controlled substances  
 ■ Controlled under PSA 2016  
 ■ Substances currently not controlled  
 ■ Bulking/Cutting agent

## New Psychoactive Substances Top Ten

One year on - a comparison of NPS identified this quarter compared to the same period last year, during which time the Psychoactive Substances Act 2016 commenced (26th May 2016).

Top 10	Apr-Jun 17	Apr-Jun 16
Number 1	<b>Etizolam</b>	<b>Etizolam</b>
Number 2	<b>Buprenorphine</b>	<b>Ketamine</b>
Number 3	<b>Mirtazapine</b>	<b>Pyrazolam</b>
Number 4	<b>AMB-FUBINACA</b>	<b>Diclozepam</b>
Number 5	<b>Ketamine</b>	<b>Modafinil</b>
Number 6	<b>Quetiapine</b>	<b>3-Fluorophenmetrazine</b>
Number 7	<b>5F-PB-22</b>	<b>4-Chloromethcathinone</b>
Number 8	<b>Alprazolam</b>	<b>5F-ADB</b>
Number 9	<b>MDMB-CHMICA</b>	<b>AH-7921</b>
Number 10	<b>N-ethyl hexedrone</b>	<b>Mexedrone</b>

## Top Ten - Increase in prevalence in Benzodiazepines



Alprazolam

This quarter, we see a continuation in the rise of prevalence of benzodiazepines. Not only do benzodiazepines top the NPS top ten (etizolam), but also jointed with cannabis (no-pun intended), they occupy the number one spot for the most commonly identified psychoactive substances (diazepam). In total five benzodiazepines were submitted: diazepam, etizolam, alprazolam, clonazepam and nitrazepam.

In 2015 there were 366 deaths involving benzodiazepines. This equated to a mortality rate of 6.5 deaths per million population and was similar to the rate seen in 2014. Diazepam was the most common benzodiazepine mentioned on deaths certificates in 2015 within England and Wales, involved in 252 deaths according to the Office of National Statistics. More than 9 out of 10 deaths involving benzodiazepines also mentioned another substance, including heroin or methadone<sup>5</sup>.

Diazepam

In general diazepam is submitted as circular blue tablets with the letters 'MSJ' pressed into one side; and are blue throughout if you were to break the tablet in half. From engaging with substance use services and those working with substance users it is clear that the use of non-prescribed diazepam is prevalent amongst individuals attending drug services and is often reported as being used in combination with other depressant substances such as heroin and alcohol. This combination of depressant substances increases an individual's chance of overdose.



Etizolam



Etizolam, returns to the number one spot in our Top 10 NPS chart after appearing there in Apr-Jun 2016, this quarter included the introduction of the Psychoactive Substances Act. In the year prior to this quarter Etizolam was identified on six occasions. This is less than the number of identification in the past three months. Etizolam was controlled as a Class C substance under an amendment to the Misuse of Drugs Act 1971 on 31st May 2017. 1mg of etizolam is approximately equivalent to a 10mg of diazepam<sup>4</sup>.

4. WHO expert committee on drug dependence (1991) [Online]. Available at: [http://whqlibdoc.who.int/trs/WHO\\_TRS\\_808.pdf](http://whqlibdoc.who.int/trs/WHO_TRS_808.pdf) [accessed 20th July 2017].

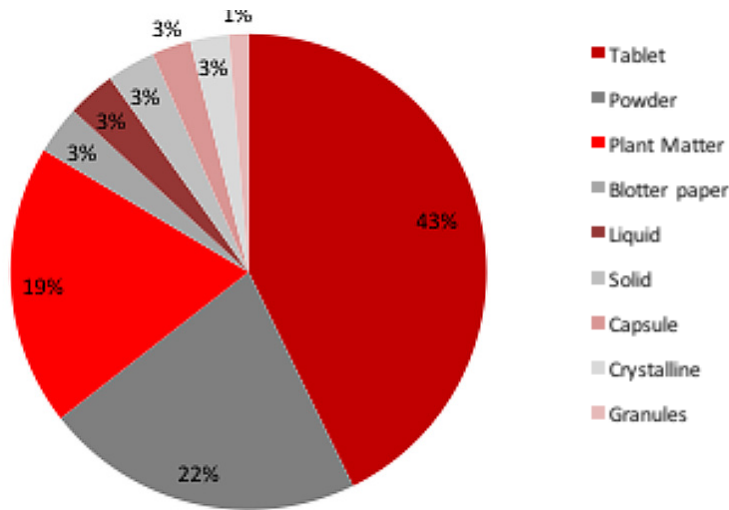
5. Deaths related to drug poisoning in England and Wales: 2015 registrations; Office of National Statistics <https://www.ons.gov.uk/peoplepopulationandcommunity/birthsdeathsandmarriages/deaths/bulletins/deathsrelatedtodrugpoisoninginenglandandwales/2015registrations>

## Form of Sample & Method of Consumption

### Mind Altering/Psychoactive

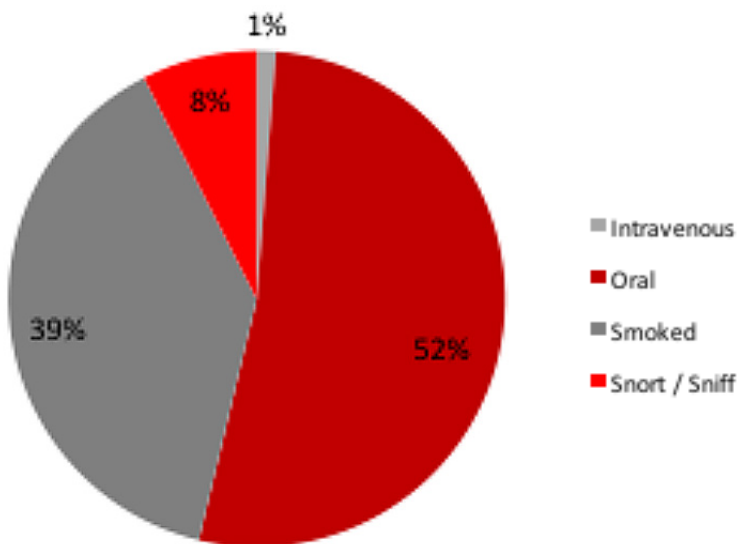
Unlike previous quarters, tablets were the most commonly identified sample form during the April to June 2017 quarter. This can be explained by the increase in prevalence of benzodiazepines, increasing submissions of MDMA pills (this is alongside increasing evidence of high dosage MDMA pills) and WEDINOS identifying more medications, such as buprenorphine, mirtazapine and quetiapine.

### Mind Altering/Psychoactive - Form of Sample



Where samples were purchased as Mind Altering/Psychoactive & a method of consumption was recorded (46 per cent, n=80), and assuming that all plant matter and plant matter Synthetic Cannabinoid Receptor Agonists are smoked, samples were consumed through a variety of methods, the most common was oral consumption (52% per cent), this is comparable to last quarter (51%); followed by smoking (39 per cent, 32 per cent last quarter). Snorting / sniffing as a route of administration made up 8 per cent of responses, with 1 per cent stating they used their substance via intravenous injection down from 3 per cent the previous quarter and 7 per cent the quarter prior to that.

### Mind Altering/Psychoactive - Method of Consumption



# GEOGRAPHIC PROFILES / LOCAL TRENDS

## Abertawe Bro Morgannwg University Health Board (ABMU)

- 49 samples were received from ABMU this quarter
  - During analysis 27 substances were identified in isolation or combination. Five samples contained no active compound and one remained unknown as there was an insufficient amount of the sample available for testing.
  - Buprenorphine was the most commonly identified substance.
  - Four SCRA's were identified, including the high potency MDMA-CHMICA and AMB-FUBINACA.

## Aneurin Bevan University Health Board (ABU)

- 21 samples were received ABU this quarter.
- During analysis of those samples, 7 substances were identified either in combination or in isolation, with two samples having no active compound identified.
- Cannabis was the most commonly identified substance within the in ABU. This was followed by Amphetamine. For the second consecutive quarter no synthetic cannabinoid receptor agonists were submitted this quarter.

## Betsi Cadwaladr University Health Board (BCU)

- 0 samples were received from BCU this quarter
- However, we are aware that samples have been submitted from BCU post 9th June.

## Cardiff & Vale University Health Board (CVU)

- 27 samples were received from CVU this quarter
- During analysis 20 substances were identified either in combination or in isolation. Three samples had no active compound identified.
- Cocaine was the most commonly identified substance
- A sample submitted as diazepam, was found to contain zolpidem.

## Cwm Taf University Health Board (CTU)

- 8 samples were received from CTU this quarter
- During analysis 7 substances were identified either in isolation or combination.
- Benzodiazepines' accounted for half of samples. One sample submitted as diazepam was found to contain etizolam.

## Hywel Dda University Health Board (HDU)

- 10 samples were received from HDU this quarter
- During analysis seven substances were identified in combination or isolation.

Help us to build a better picture of substance prevalence or any trends in substance use within Wales and the wider UK. WEDINOS would happily accept an increase in samples of psychoactive substances submitted. If you require further information on submitting a sample please visit [www.wedinos.org](http://www.wedinos.org) or email [admin@wedinos.org](mailto:admin@wedinos.org)

# News from the Home Office and abroad

14th July 2017 – Home Office – Drug Strategy 2017 - <https://www.gov.uk/government/publications/drug-strategy-2017>

July 2017 – EMCDDA – Europol Joint Report on a new psychoactive substance: N-phenyl-N-[1-(2-phenylethyl)piperidin-4-yl]-furan-2-carboxamide (furanylfentanyl) - [http://www.emcdda.europa.eu/system/files/publications/4682/JOINT\\_REPORT\\_furanylfentanyl\\_web.pdf](http://www.emcdda.europa.eu/system/files/publications/4682/JOINT_REPORT_furanylfentanyl_web.pdf)

1st June 2017 - Home Office – Controlled drugs list (update) - <https://www.gov.uk/government/publications/controlled-drugs-list--2#history>

1st June 2017 – Home Office - Circular 008/2017: a change to the Misuse of Drugs Act 1971 to control U-47,700, 12 methylphenidate related substances and 16 'designer' benzodiazepines - <https://www.gov.uk/government/publications/circular-0082017-change-to-the-misuse-of-drugs-act-1971-to-control-u-47700>

16th June 2017 - Methiopropamine: a review of the evidence of use and harm - <https://www.gov.uk/government/publications/methiopropamine-a-review-of-the-evidence-of-use-and-harm>

June 2017 - EMCDDA - Preventing overdose deaths in Europe (Perspectives on drugs) - [http://www.emcdda.europa.eu/system/files/publications/2748/POD\\_Preventing%20overdose%20deaths.pdf](http://www.emcdda.europa.eu/system/files/publications/2748/POD_Preventing%20overdose%20deaths.pdf)

June 2017 – EMCDDA - Synthetic cannabinoids in Europe (Perspectives on drugs) - [http://www.emcdda.europa.eu/system/files/publications/2753/POD\\_Synthetic%20cannabinoids\\_0.pdf](http://www.emcdda.europa.eu/system/files/publications/2753/POD_Synthetic%20cannabinoids_0.pdf)

June 2017 – EMCDDA - Drug consumption rooms: an overview of provision and evidence (Perspectives on drugs) [http://www.emcdda.europa.eu/system/files/publications/2734/POD\\_Drug%20consumption%20rooms.pdf](http://www.emcdda.europa.eu/system/files/publications/2734/POD_Drug%20consumption%20rooms.pdf)

June 2017 – EMCDDA - Drugnet Europe 98 - [http://www.emcdda.europa.eu/system/files/publications/4543/TDAA17002ENN\\_PDFWEB\\_DN98.pdf](http://www.emcdda.europa.eu/system/files/publications/4543/TDAA17002ENN_PDFWEB_DN98.pdf)

June 2017 – EMCDDA - High-risk drug use and new psychoactive substances - <http://www.emcdda.europa.eu/system/files/publications/4540/TD0217575ENN.pdf>

June 2017 – EMCDDA - United Kingdom, Country Drug Report 2017 - <http://www.emcdda.europa.eu/system/files/publications/4529/TD0116925ENN.pdf>

June 2017 – EMCDDA - European Drug Report 2017: Trends and Developments - <http://www.emcdda.europa.eu/system/files/publications/4541/TDAT17001ENN.pdf>

The WEDINOS project does not test food samples, biological samples, samples submitted within paraphernalia of use, samples that are submitted with an incomplete effects form. On Friday 25th July 2014 WEDINOS stopped accepting samples of Image and Performance Enhancing Drugs other than those submitted by sentinel contributors.