PHILTRE

Annual Report
Adroddiad Blynyddol
2021 - 2022

WEDINOS

www.wedinos.org

Contents

Foreword

Following easing of COVID-19 pandemic restrictions, **WEDINOS** has seen a substantial rise in activity over the last twelve months, with an increase of 92.6 percent in sample submissions. Along with the re-opening of night time economy venues and the return of music festivals, community submissions increased by almost 60 percent, evidencing a heightened awareness of the **WEDINOS** service and its benefits in harm reduction. With this increased number of samples, **WEDINOS** has also seen a 14.6 percent increase in the number of substances identified.

Benzodiazepines has remained the most commonly identified chemical group of psychoactive substances for half a decade. During 2021-22, a total of 20 benzodiazepines were profiled, with diazepam being both the most commonly submitted substance by purchase intent. However, as in previous years, substitution within the illicit diazepam market remains high - 57.3 percent did not contain diazepam.

The concerns for public health remain as these products are not pharmaceutical grade and, despite their appearance, they are counterfeit. Counterfeit products, as evidenced by **WEDINOS** can contain different substances and dose ranges. This means that individuals who consume these products are not aware of the dose, time of onset of effects, duration of effects or contraindications with other substances or medications and as a consequence are at higher risk of potential health and other harms.

WEDINOS continues to provide a high quality, accessible and important service and thanks to all those involved, collaborating with, and submitting samples to ensure this valuable work continues.

Josie Smith
Senior Epidemiologist, Public Health Wales and Programme Lead, **WEDINOS**

WEDINOS - A Reminder

WEDINOS is funded by Welsh Government and was launched in October 2013 as a collaboration between Public Health Wales, Cardiff Toxicology Laboratories at University Hospital Llandough, Cardiff and Vale University Health Board and the School of Pharmacy at Cardiff University.

WEDINOS provides a framework for the collection and testing of samples of psychoactive substances and combinations of drugs (hereafter referred to as "samples") along with information on the symptoms that those submitting samples experienced, both expected and unexpected. Collation of these findings along with identification of the chemical structure of the samples enables the dissemination of pragmatic evidence-based harm reduction information for those using psychoactive drugs or considering use.

The analytical tools used for the profiling of samples includes a Quadrupole Time of Flight (Q-ToF) mass spectrometer (the primary analytical tool), a Fourier-Transform Infrared (FTIR) spectrometer, Nuclear Magnetic Resonance (NMR) spectroscopy, Gas Chromatography–Mass Spectrometry (GC-MS) and Liquid Chromatography–Mass Spectrometry (LC-MS).

Headline Figures 2021/22

Total to date:

27,286 samples received

- 23,249 analysed
- 641 substances identified either in isolation of combination.
- From 297 different organisations, services and night time economy (NTE) venues (night club amnesty bins) from across the UK.

This Year 2021/22:

- 7,457 samples received representing a increase of 92.6 percent from 2020/21.
- 6,345 analysed ^ 85.7 percent.
  - Community samples increased by 59.5 percent to 4,684.
- 181 substances identified ^ 14.6 percent.
- 90 different organisations, services and NTE venues ^ 73.1 percent.
- Median age of sample providers 32 years (range 14 to 80 years).

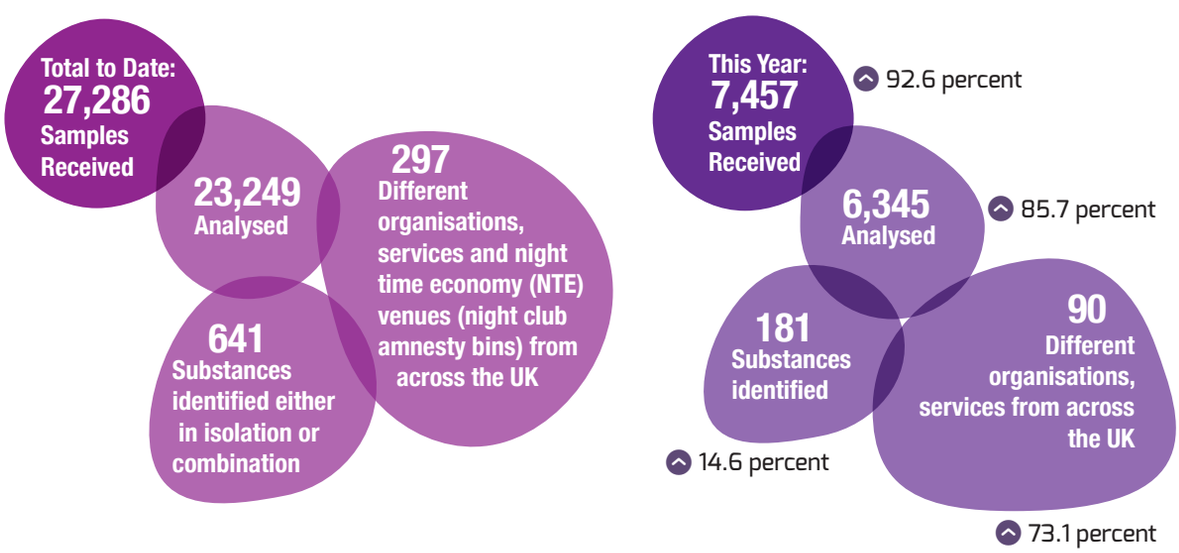
benzodiazepines

- As in the previous four years benzodiazepines were the most commonly identified class of mind altering/psychoactive substances; with 20 identified.

cocaine

- Cocaine was the most commonly identified substance.
  - Most commonly identified in the community was cocaine, followed by diazepam.
  - Criminal justice settings – Mirtazapine was the most commonly identified substance, however, more samples were profiled as "no active compound".

Fig. 1: WEDINOS activity to date and in last year 2021/22



A Wider Perspective . . .

Global, European, England & Wales, and Welsh estimates:

The United Nations Office for Drugs and Crime (UNODC) estimates around 275 million people, had used drugs in the year previous to their latest report (2021), equating to 5.5 percent of the global population aged 15 to 64 years. This figure represents a 22 percent increase from 2010. This includes an estimated 11.3 million people who inject drugs, this figure has not changed since 2018.

36.3 million people are drug dependent and/or require treatment services.

494,000
people died as a result of drug use

In 2019, 494,000 people died as a result of drug use globally. Of those deaths 366,000 were deaths indirectly related to drug use, e.g. liver disease due to hepatitis, HIV and AIDS, self-harm associated with drug use.

Deaths attributed to drug use disorders (128,000) accounted for 26 percent, of which opioid use disorders contributed to 69 percent, or 88,000 deaths.[1.]

For Europe Union, the European Monitoring Council for Drugs and Drug Addiction(EMCDDA), reported that around 83 million people, or 28.9 percent of the population aged 15 to 64, had tried illicit drugs at least once in their lifetime [2.*].

In the United Kingdom, the Crime Survey for England and Wales (CSEW) 2019/20 (this is the most recent published report) reported that 3.2million people, or 9.4 percent of adults aged 16 to 59 had taken a drug in the last year; this was the same as 2018/19.

Around 1 in 5 of 16 to 24 year olds, 21 percent, reported taking a drug in the last year, a similar number to previous year.

For adults aged 60 to 74, 1 percent reported using drugs in the last year, this was similar to previous years [3.].

Provisional headline figures for problem drug use estimates in Wales**, including populations not in contact with any services, suggest that the total number of problem drug users in 2019-20 was 44,620 (95 percent confidence interval (CI) 38,280 – 53,060) [4.].

1. World Drug Report 2021 (United Nations publication, Sales No. E.21.XI.8) https://www.unodc.org/res/wdr2021/field/WDR21_Booklet_2.pdf [accessed 29th April 2022].
2. European Monitoring Centre for Drugs and Drug Addiction (2021), European Drug Report 2021: Trends and Developments, Publications Office of the European Union, Luxembourg.

* This should be regarded as a minimum estimate due to reporting biases.

3. Crime Survey for England and Wales 2019/20; Drug misuse in England and Wales: year ending March 2020. https://www.ons.gov.uk/peoplepopulationandcommunity/crimeandjustice/articles/drugmisuseinenglandandwales/yearendingmarch2020 [accessed 29th April 2021].

** In this context problem drug use (PDU) is defined by the European Monitoring Centre for Drugs and Drug Addiction (EMCDDA) as "injecting drug use or long duration or regular use of opioids, cocaine and/or amphetamines [including amphetamine type substances]".

4. Data mining Wales: The annual profile for substance misuse 2020-21; Public Health Wales; Cardiff; 2022; https://phw.nhs.wales/publications/publications1/data-mining-wales-the-annual-profile-for-substance-misuse-2020-21/ [accessed 25th May 2022].

Harms from Substance Use - Wales

In Wales, the number of hospital admissions for poisonings with named illicit drugs has decreased by 11.8 percent in the last year, from 6,295 in 2019-20 to 5,554 in 2020-21.

224
Deaths

In 2020, 224 deaths due to drug poisoning were registered in Wales, a decrease of 6.7 percent from the previous calendar year. Of all drug-poisoning deaths, 149 (66.5 percent) were identified as a drug misuse death, a decrease of 9.7 percent from 165 deaths in 2019.[5.]

WEDINOS . . . Samples

7,547
Samples

In total **WEDINOS** received and analysed 7,547 samples from 90 services and settings across the UK, as well as from individuals. These samples can be separated into three broad categories:

- Community
- Night Time Economy (NTE)
- Criminal Justice Settings

Samples submitted from the NTE and Criminal Justice Settings are submitted from amnesty bins or are non-attributable finds and therefore are not accompanied by any information relating to purchase intent, effects or demographics.

5. Data mining Wales: The annual profile for substance misuse 2020-21; Public Health Wales; Cardiff; 2022; https://phw.nhs.wales/publications/publications1/data-mining-wales-the-annual-profile-for-substance-misuse-2020-21/ {accessed 25th May 2022}

Key Findings . . . What?

Most commonly identified substances – All samples

benzodiazepines

The most commonly identified chemical group of psychoactive substances for the fourth year, were benzodiazepines, with 20 benzodiazepines identified (18 were identified in 2020/21); however, seven were identified on five or less occasions.

diazepam
etizolam

As with the previous three year's findings, diazepam (n=490) was the most commonly identified benzodiazepine. Etizolam was the second most commonly identified substance, with 358 identifications, despite it being reported on only 46 occasions as purchase intent. Etizolam is most commonly identified as a substitute for diazepam, but also within samples submitted as alprazolam. Etizolam is more potent than diazepam. This is a potential risk for individuals using benzodiazepines as dosage and potency varies greatly.

cocaine

In a return to pre-COVID-19 restriction trends, Cocaine was the most commonly identified psychoactive substance identified by **WEDINOS**.

As discussed in the 2020-2021 report, in relation to a decrease in submissions, it is likely that this return in prevalence of cocaine amongst submissions to **WEDINOS** is as a result of the re-opening of night time economy venues, and the increased receipt of samples from the amnesty bins at those type of venues.

The most recently published CSEW 2019/20 report, stated that there was no change in last year use of cocaine among adults aged 16 to 59 from the previous year. However, they did report a fall in the number of frequent users from 14.4 percent in year ending March 2019 to 8.7 percent in year ending March 2020.

caffeine

Consistent with previous years, caffeine was the most popular bulking/cutting agent identified, however, as well as being found in combination with other substances, several samples of powders and tablets were found to contain caffeine in isolation.

Table 1: Most commonly identified mind altering/psychoactive substance WEDINOS samples

	2021/22	2020/21
1	Cocaine	Diazepam
2	MDMA	Cocaine
3	Diazepam	Flubromazolam
4	Ketamine	Etizolam
5	Caffeine	MDMB-4en-PINACA
6	No Active Component Identified	Flualprazolam
7	Etizolam	Alprazolam
8	Tetrahydrocannabinol	MDMA
9	Cannabidiol	Caffeine
10	Flubromazolam	Tetrahydrocannabinol

As previously mentioned, **WEDINOS** receives samples from a wide variety of community settings, **WEDINOS** works closely with the six Welsh prisons, reporting separately on finds that have no evidentiary value. In the next section of this report we focus on samples from community settings.

Community Settings . . .

4,684 samples were submitted from community settings including education, health (incl. Emergency Departments), mental health, housing and homelessness, substance misuse services and individuals.

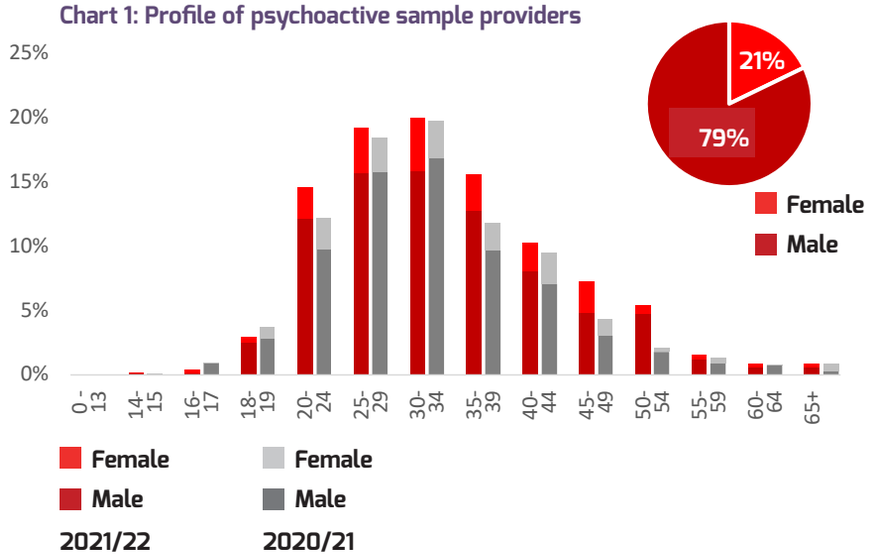
Of these 4,684 samples, demographic information was available for 95 percent (n=4,451), this also indicates an improvement in data quality, alongside the increase in samples, as demographic information was only available for 90 per cent for 2020-2021 data.

79 percent of the samples were submitted by males and 21 percent by females. This is a slight change from the 82 percent male and 18 percent female sex split amongst providers the previous year.

The median age for all mind altering / psychoactive sample providers (Wales and wider UK) was 32 years, range 14 to 80 years, in comparison to 33 years and 14 to 89 years in 2020-2021.

- **Females** - median age was 33 years (34 years in 2020-2021, and down from 35 the previous year) (range: 14-75 years)
- **Males** - median age was 32 years (this is the same as the previous year) (range 14-80 years)

Chart 1: Profile of psychoactive sample providers



Samples submitted by individuals in the age range 0-17 years, in order of prevelance, included, but not exclusively: ADB-BUTINACA (all purchased as THC vape liquids), MDMA, flualprazolam (purchased as alprazolam), etizolam (purchased as diazepam), AB-PINACA (purchased as a THC vape liquid) ketamine, cannabis, 2C-B and amphetamine.

For older adults aged 60 years and above, in order of prevelance, included but not exclusively; samples containing: cocaine, diazepam, zopiclone, caffeine, flubromazolam (all purchased as diazepam), and etizolam (all purchased as diazepam).

Community Samples: What?

Since the launch of **WEDINOS** in 2013 the project has consistently evidenced the substitution of substances within the UKs illicit drug market. Table 2 shows the changes in the "top ten most common" substances at the submission stage (purchase intent) and the post analysis.

Samples listed as unknown include samples submitted under a name that does not allow the substance or category of substance to be identified, samples found or unknown substances; such as those submitted by patients with acute effects within a health setting, such as an emergency department or mental health ward.

Table 2: Most common substances pre (perceived) and post (actual) analysis

	Community purchase intent	Community post analysis
1	Diazepam	Cocaine
2	MDMA	Diazepam
3	Cocaine	MDMA
4	Alprazolam	Caffeine
5	Unknown	Etizolam
6	THC	No Active Component Identified
7	Amphetamine	Flubromazolam
8	Ketamine	Ketamine
9	Zopiclone	Tetrahydrocannabinol
10	Cannabis	Alprazolam

Table 2 demonstrates changes between the most commonly reported pre analysis; and the most commonly identified contents post analysis.

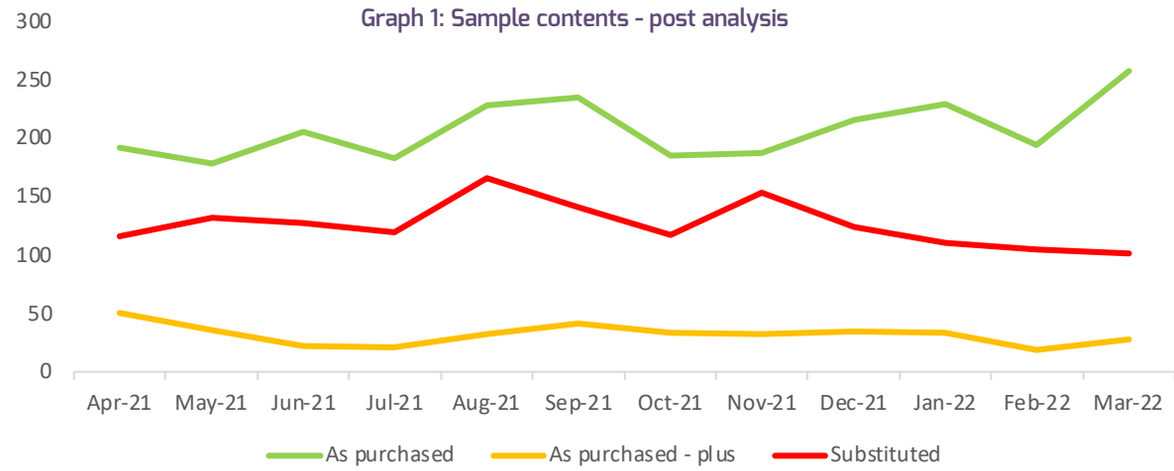
Etizolam and flubromazolam are not present on the pre analysis list, however, sit as the fifth and seventh most identified substances overall. In fact both substances were only listed a total of 48 times in the pre analysis purchase intent. Following analysis these substances were identified on a combined total of 522 times.

It may be argued that the high pre analysis presence of "unknown" substances would be the biggest influencer of this change, however, even following removing these samples we find that over the past year 35 percent of samples submitted to **WEDINOS** with a substance listed in the purchase intent did not contain what was expected, this is the same level of substitution as 2020-21.

Some samples were found to contain the purchase intent and other substances; such as a sample purchased as MDMA, that was found to contain MDMA and 2C-B upon analysis. Other samples were found to contain a different substance or substances; for example a sample purchased as diazepam, which was found to contain etizolam and phenacetin.

The levels of additional substances and substitution are shown in graph 1.

Graph 1: Sample contents - post analysis

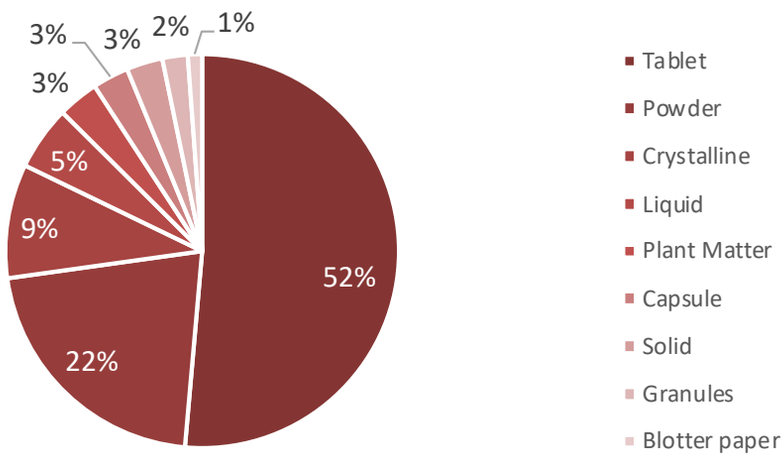


Community: How?

Form of sample

WEDINOS requests the 'form of sample' for each submission to monitor and report the various forms substances appear on the market and potential differences in method of consumption.

Chart 2: Form of psychoactive samples

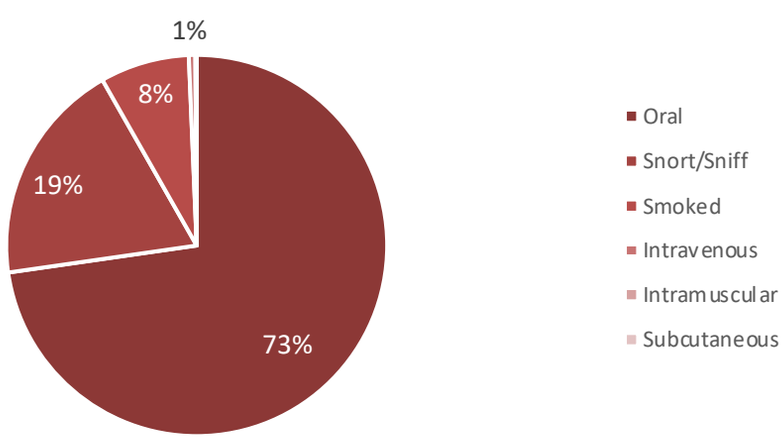


As in the previous year, there was an increase in the number of tablets submitted. This is mirrored by the high numbers of samples submitted believed to be diazepam and alprazolam.

Method of Consumption and Harm Reduction Advice

Assuming that all plant matter samples are smoked, the remaining samples (pills, liquids, tabs, granules etc) were ingested through a variety of methods, most common, 73 percent were taken orally (swallowing, bombing). This high prevalence of oral consumption is likely linked to the high number of submissions purchased as diazepam or alprazolam.

Oral consumption is followed by snort / sniff at 19 percent, as shown in Chart 3.



One percent reported intravenous injecting of substances.

Samples injected were purchased as and found to contain, heroin and amphetamine

Injecting drug use carries with it inherent risks of bacterial and viral infection over and above the risks / toxicity of the substance being injected.

Injecting

- Do not shareany injectingequipment; this includes water, spoons and filters as well as needles and syringes. It is best practice to use a filer for drawing up.
- Ensure you have enough needles for repeat injecting.
- Rotate Sites.
- Ensure any wounds are treated as soon as possible
- Heat and redness at injecting site - seek medical attention
- Ensure that your equipment is correct for its intended use
- Injecting intensifies everything about the drug experience
- Most New Psychoactive Substances are water soluble and do not require the addition of an acid (usually citric acid or ascorbic acid (Vit C)).

For further harm reduction information, please visit:
http://www.wedinos.org/harm_reduction_advice.html

All injecting, regardless of the substance, carries a significant risk of serious infection and other implications. Individuals who currently inject drugs or have previously injected should get tested for blood borne viruses.

Powders and crystalline materials

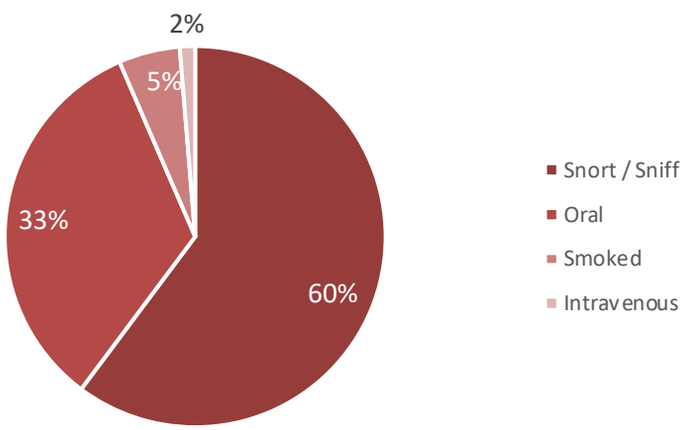
Focusing on the method of use for powders and crystalline materials, the most common method of consumption was snorting/sniffing with 60 percent reporting this method, as shown in Chart 4, this is comparable to 2020-21.

Insufflation (Sniffing/Snorting)

- Always use clean devices (snorter).
- User your own device.
- Do not share devices; there may be traces of blood on your equipment.
- Snort high up the nostril to avoid the most sensitive soft tissue.
- Clean out nasal passages after use with damp tissue or an ear bud.
- Alternate nosetrils to lesson damage to one side.
- If your nose is bleeding - give it a rest.

Snorting/sniffing potentially caustic or toxic substances carries additional risks related to damage to the nasal passages as well as potential transmission of blood borne viral infection when sharing snorting paraphernalia in the presence of nasal passage damage and blood.

Chart 4: Method of consumption: Powders



Benzodiazepines

Benzodiazepines are a group of depressant / sedative drugs.

Benzodiazepines have a history of legitimate pharmaceutical manufacture and marketing; alongside prescribed medical use in the United Kingdom. Globally they are widely used in medicine as anticonvulsants, sedatives and tranquilizers.[6.]

Public Health England analysis showed that 1.4million adults in England had received one or more prescription for benzodiazepines in 2017 to 2018. These prescriptions were mostly issued for the treatment of anxiety[7.]. The most commonly prescribed benzodiazepine is diazepam.

Release comment that British doctors still issue close to 18 million diazepam prescriptions a year[8.].

Available as a prescription only medication, any other supply, manufacture or possession on diazepam is controlled under the Misuse of Drugs Act 1971. Globally, there are currently 38 benzodiazepines under international control.

Illicit market and prevalence

The European Monitoring Council for Drugs and Drugs Addiction notes the growing concerns relating to the misuse of benzodiazepines, either as diverted medications or purchased via the illicit market, or the purchasing of benzodiazepines not licensed for medical use via the illicit market.

DARK WEB:
The part of the World Wide Web that is only accessible by means of special software, allowing users and website operators to remain anonymous or untraceable.

Of the top 50 "Dark Web" illicit drug vendors by sales volumes between 2011 and 2020, 8 percent primarily sold benzodiazepines[1.].

The Global Drug Survey 2020 reported that of the 32,000 respondents from 20 countries across the globe, 14.9 percent reported having used benzodiazepines in the past 12 months.

The latest release of the Crime Survey for England and Wales (9th December 2020)[9.] reports on last year use of tranquilizers, a group of substances that includes barbiturates and benzodiazepines.

0.5 percent of 16 to 59 year olds reported using tranquilizers in the year April 2019 to March 2020, this is compared to 0.8 percent of individuals aged 16 to 24 years old.

6. World Drug Report 2021 (United Nations publication, Sales No. E.21.XI.8)
7. Prescribed medicines review: summary, Public Health England, updated 3rd December 2020; https://www.gov.uk/government/publications/prescribed-medicines-review-report/prescribed-medicines-review-summary {accessed 25th May 2022}
8. https://www.release.org.uk/drugs/diazepam-valium/history {accessed 25th May 2022}
9. Drug misuse in England and Wales: year ending March 2020; Office for National Statistics, 9th December 2020; https://www.ons.gov.uk/peoplepopulationandcommunity/crimeandjustice/articles/drugmisuseinenglandandwales/yearendingmarch2020 {accessed 25th May 2022}

The Office for National Statistics reported a 19.3 percent increase in deaths involving benzodiazepines in England and Wales in 2020, rising from 399 to 476 deaths. However, the majority of these deaths also mentioned another substance, often heroin/morphine, which increases an individuals risk of overdose [10].

In Wales, illicit drug seizures measured by dose, benzodiazepines accounted for the majority of drugs seized with over 719,000 doses seized in 2019-20 by Welsh police forces; up from 212,000 doses seized in 2018-19, over a 200 percent increase [11].

In 2020-21 there were 817 benzodiazepine related admissions involving 720 individuals. The European Age Standardised Rate was 27.1 admissions per 100,000 population. Compared to last year there has been a 9.5 percent increase[12].

In 2020, 35 drug misuse deaths in Wales involved benzodiazepines, up from 22 in 2019; but lower than the 50 deaths involving benzodiazepines in 2018 and 2016.

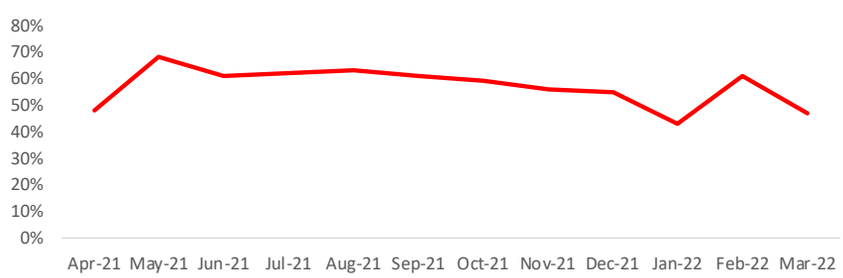
Substitutions

In the reporting period 2021-22, **WEDINOS** received 1,045 samples submitted in the belief they were diazepam. Within these samples 37 substances were identified, either in isolation or combination. 108 samples were profiled as containing no active compounds.

Despite being the purchase intent, diazepam (in isolation), was profiled as being the sample content following analysis in 42.7 percent (n=448) of submissions, meaning a substitution rate of 57.3 percent.

Throughout the year, the range of substitutions amongst samples submitted as diazepam was between 43 percent (January 2022) to 68 percent (May 2021).

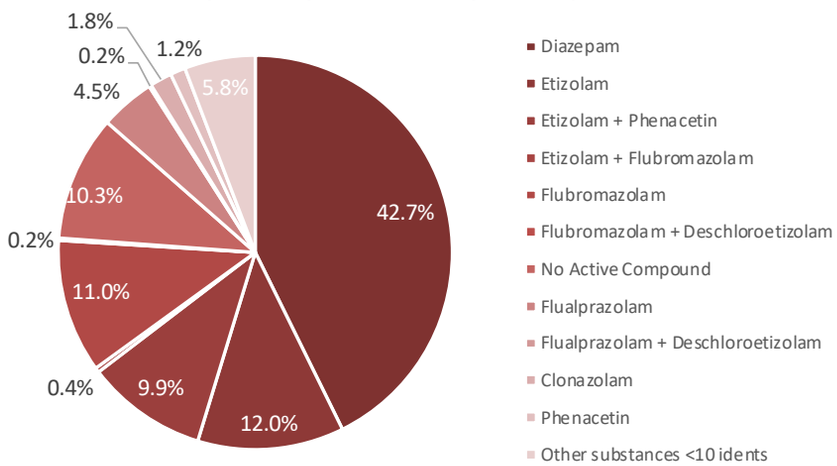
Percentage of substitution amongst samples submitted as diazepam



10. Deaths related to drug poisoning in England and Wales: 2020 registrations; Office for National Statistics, 3rd August 2021; https://www.ons.gov.uk/peoplepopulationandcommunity/birthsdeathsandmarriages/deaths/bulletins/deathsrelatedtodrugpoisoninginenglandandwales/2020#drug-poisonings-from-selected-substances {accessed 25th May 2022}
11. Data mining Wales: The annual profile for substance misuse 2020-21; Public Health Wales; Cardiff; 2022; https://phw.nhs.wales/publications/publications1/data-mining-wales-the-annual-profile-for-substance-misuse-2020-21/ {accessed 25th May 2022}
12. Data mining Wales: The annual profile for substance misuse 2020-21; Public Health Wales; Cardiff; 2022; https://phw.nhs.wales/publications/publications1/data-mining-wales-the-annual-profile-for-substance-misuse-2020-21/ {accessed 25th May 2022}

The most commonly identified substitute was the thienodiazepine etizolam. Etizolam was identified in 22.6 percent (n=236) of samples submitted as diazepam. Of those 236 samples, 53.4 percent (n=126) contained etizolam in isolation, 44 percent contained etizolam and phenacetin. The remaining 2.6 percent were profiled as containing either, etizolam and flubromazolam; etizolam and diclazepam; and etizolam and flualprazolam.

Chart 5: Diazepam Samples - Contents post analysis



Etizolam is a thienodiazepine derivative. Thienodiazepines are essentially identical in their pharmacological action, subjective effects, toxicity and harm potential as benzodiazepines; targeting the same GABA receptors.

Etizolam has a high affinity for these benzodiazepine GABA receptors, and is considered to be 5 to 10 times more potent than diazepam[13].

Although, not licensed as a prescribed medication in the UK, etizolam is prescribed as an anxiolytic (also called anti-anxiety medication) in India, Italy and Japan.

Etizolam has played a large part in the UK and European illicit benzodiazepine market, especially in the manufacture of fake benzodiazepine medications, such as diazepam and alprazolam[14]. Initially described as a new psychoactive substance, it is now controlled as a Class C substance, under the Misuse of Drugs Act 1971 in the United Kingdom, it came under internationally control in November 2020.

W025040

Date Received: 29 Mar 2022
Postcode: G4 -
Purchase Intent: Valium
Package Label: Not Stated
Sample Colour: White
Sample Form: Tablet
Consumption Method: Oral
Self-Reported Effects: Breathlessness, Memory Loss, Confusion, Depression
Sample Upon Analysis (Major): Etizolam, Phenacetin
Sample Upon Analysis (Minor):

Click to Enlarge

13. Neilsen. S, McAuley. A.; Etizolam: A rapid review on pharmacology, non-medical use and harms; Drug and Alcohol Review; 3rd April 2020; https://doi.org/10.1111/dar.13052 {accessed 25th May 2022}
14. European Monitoring Centre for Drugs and Drug Addiction (2021), New benzodiazepines in Europe – a review, Publications Office of the European Union, Luxembourg.

In recent years there has been increasing numbers of drug relating deaths within the UK that have mentioned etizolam on the death certificate, particularly in Scotland, where between 2015 and 2020 the number of times etizolam was mentioned in a drug related deaths rose from 6 percent to 60 percent. However, the majority of the 2020 cases, involved multiple substances with only 1% mentioning etizolam in isolation.

Direct access submission of samples to **WEDINOS** allows capture of evidence based local and national drug market trend data, enabling drug services to provide pragmatic information on relevant drug substitutions and harms. Combining this with other data sources such as hospitalisations, toxicology and drug related death data further enables services to provide targeted information relating to specific substances and contraindications, in this instance addressing poly-drug use involving street purchased "diazepam".

In March 2020 the Medicines and Healthcare products Regulatory Agency (MHRA), published a reminder to healthcare professionals in relation to benzodiazepines and opioids, a reminder of risk of potentially fatal respiratory depression. This highlighted the increased risk of sedation, respiratory depression, coma, and death, whilst the substances are prescribed together[15].

This message is also delivered by drug services to individuals who use illicit substances, including benzodiazepines (such as diazepam), opioids (heroin/morphine/tramadol) and alcohol.

15. Benzodiazepines and opioids: reminder of risk of potentially fatal respiratory depression; Medicines and Healthcare products Regulatory Agency; 18th March 2020; https://www.gov.uk/drug-safety-update/benzodiazepines-and-opioids-reminder-of-risk-of-potentially-fatal-respiratory-depression {accessed 25th May 2022}

Night Time Economy Venues and Music Festivals

Through partnership working with the Welsh police forces **WEDINOS** receives samples from some Night Time Economy Venues and Music Festivals in Wales, which have been surrendered in amnesty bins. These samples have no forensic or evidentiary value, and as they are anonymously surrendered they are not accompanied by any demographic, purchase intent, dosage or effects data. However, they do provide important insight into the drugs in circulation in this specific market.

Between April 2021 and March 2022, **WEDINOS** analysed 1,102 samples from 24 night time economy venues and 3 festivals, across the Cardiff and Vale, Cwm Taf Morgannwg and Western Bay University Health Board areas.

Within these samples the most commonly identified primary substance (excluding bulking and cutting agents and metabolites), was cocaine (n=647), followed by ketamine (n=213) and MDMA (n=122).

Within samples of cocaine the main bulking and cutting agents profiled were levamisole (n=148/647) and benzocaine (n=88/647).

Although we cannot discuss substitutions in relation to samples submitted via Night Time Economy venues and Music festivals as we do not have any information relating to purchase intent, we can comment on the most commonly identified substances based on data from community submissions.

Cocaine

Cocaine is a powerful central nervous system stimulant extracted from the coca plant which grows in regions of South America. Cocaine is available as powder cocaine (primarily snorted) and crack cocaine (primarily smoked).

Between 2014 and 2019 the output of global cocaine manufacture doubled, to an estimated 1,784 tons (expressed at 100 percent purity) in 2019. This is the highest level ever recorded. At that time there was an estimated 20 million global cocaine users[16].

On a European level, cocaine is the second most commonly consumed drug in Europe, with an estimated 3.5million adults aged 15 to 64 using cocaine in the previous year (EMCDDA 2021)[17].

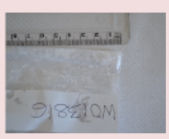
The most recent Crime Survey for England and Wales reported that around 873,000 (2.6 percent) adults aged 16 to 59 years had used cocaine in the last year (to year ending March 2020).

Of the 4,561 deaths related to drug poisoning registered in 2020, 777 deaths involved cocaine, an increase of 9.7 percent from 2019[18].

16. World Drug Report 2021 (United Nations publication, Sales No. E.21.XI.8).
17. European Monitoring Centre for Drugs and Drug Addiction (2021), European Drug Report 2021: Trends and Developments, Publications Office of the European Union, Luxembourg.
18. Deaths related to drug poisoning in England and Wales: 2020 registrations; Office for National Statistics, 3rd August 2021; https://www.ons.gov.uk/peoplepopulationandcommunity/birthsdeathsandmarriages/deaths/bulletins/deathsrelatedtodrugpoisoninginenglandandwales/2020#drug-poisonings-from-selected-substances {accessed 25th May 2022}

W013816

Date Received: 19 May 2020
Postcode: HD7 -
Purchase Intent: ODSMT
Package Label: Not Stated
Sample Colour: White
Sample Form: Powder
Consumption Method: Not Stated
Self-Reported Effects: Not Stated
Sample Upon Analysis (Major): N-ethylheptedrone
Sample Upon Analysis (Minor):



Click to Enlarge

In Wales, in 2020-21, there were 426 cocaine related admissions involving 389 individuals. The number of admissions for cocaine have more than doubled in the last eight years, from 251 in 2012-13[19].

Between April 2021 and the end of March 2022, 566 samples were submitted in the belief that they were cocaine. 4 per cent of these samples (n=21) were profiled as containing other substances. The most commonly identified substitutes were ketamine (n=5) and cathinone's (n=4) and samples that contained no active substances (n=3).

26 percent of these samples (n=148) contained cocaine and other substances. The large majority of these samples contained cocaine and levamisole. Levamisole is an anthelmintic medication (used for expelling parasitic worms), there is some evidence of levamisole enhancing cocaine's effects in vivo, highlighting a potential synergistic relationship between the two [20].

Ketamine

Ketamine, 2-(2-chlorophenyl)-2-(methylamino)-cyclohexan-1-one, is a dissociative sedative with analgesic and anaesthetic properties.

The most recent Crime Survey for England and Wales reported that around 0.8 percent of adults aged 16 to 59 years had used ketamine in the last year (to year ending March 2020).

During 2021-2022, 160 samples were submitted as purchased as ketamine. Within these samples 8 percent (n=12), were profiled as containing no ketamine. The most commonly identified substitutes substances were cathinone's (n=4).

Seven samples (4 percent), contained other substances including levamisole (n=3), cocaine (n=2), caffeine (n=1) and benzocaine (n=1).

19. Data mining Wales: The annual profile for substance misuse 2020-21; Public Health Wales; Cardiff; 2022; https://phw.nhs.wales/publications/publications1/data-mining-wales-the-annual-profile-for-substance-misuse-2020-21/ {accessed 25th May 2022}
20. Tallarida, C. S., Egan, E., Alejo, G. D., Raffa, R., Tallarida, R. J., & Rawls, S. M. (2014). Levamisole and cocaine synergism: a prevalent adulterant enhances cocaine's action in vivo. Neuropharmacology, 79, 590–595. https://doi.org/10.1016/j.neuropharm.2014.01.002

MDMA

MDMA (3,4-Methylenedioxymethamphetamine) is a stimulant (it is structurally similar to amphetamine).

MDMA is primarily manufactured in Europe, most notably, central and western Europe.

In Europe, an estimated 2.6 million adults aged 15 to 64yrs (0.9 percent) had used MDMA in the previous year (EMCDDA 2021).

For year ending March 2020, the Office for National Statistics, Crime Survey for England and Wales estimated that 1.4 percent (n=471,000 individuals) of adults aged 16 to 59 had used MDMA in the past year.

Of the 4,561 deaths related to drug poisoning registered in 2020, 82 deaths involved MDMA [21].

During this **WEDINOS** reporting period, 607 samples were submitted with MDMA listed in the purchase intent. Of these samples 33 percent (n=203) contained no MDMA.

The most commonly identified substitutes were caffeine (n=96) and cathinone's (n=77).

Cathinone's identified were:

CATHINONE	NUMBER OF IDENTIFICATIONS
4-CHLOROMETHCATHINONE	44
EUTYLONE	11
3-METHYLMETHCATHINONE	8
DIBUTYLONE	5
MEPHEDRONE	3
ALPHA-PVP	2
ETHYLONE	2
4-CEC	1
EPHYLONE	1

21. Deaths related to drug poisoning in England and Wales: 2020 registrations; Office for National Statistics, 3rd August 2021; https://www.ons.gov.uk/peoplepopulationandcommunity/birthsdeathsandmarriages/deaths/bulletins/deathsrelatedtodrugpoisoninginenglandandwales/2020#drug-poisonings-from-selected-substances {accessed 25th May 2022}

GIG CYMRU NHS WALES | Iechyd Cyhoeddus Cymru Public Health Wales

Llywodraeth Cymru
Welsh Government

Harm Reduction Wales
Lleihau Niwed Cymru