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Data mining Wales:

***The annual profile for substance
misuse***

2022-23

**Annual statistical report on alcohol and drug use from
health, social care, education, and criminal justice services
datasets in Wales**

About Public Health Wales

The Substance Misuse Programme works to address both the current and emerging public health threats in Wales and in line with the overarching strategic objective to 'reduce health inequalities and inequities, and prevent or reduce communicable and non-communicable disease, wider harms and premature death related to drugs and alcohol use and related risk behaviours.

Substance Misuse Programme

Public Health Wales

Number 2 Capital Quarter

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Contents

Introduction.....	10
Executive Summary	11
Population level trends.....	11
Children and young people (under 25 years)	11
Adults aged 25-49 years	12
Older adults, aged 50 years and above	12
3. Headline population trends	13
3.1 Alcohol-specific and illicit drug poisoning hospital admissions	13
3.2 Alcohol related deaths and deaths from drug misuse	15
4. Hospital admissions involving use of alcohol.....	16
4.1 Alcohol-specific and alcohol-attributable hospital admissions	16
4.2 Alcohol related hospital admissions by local authority area of residence in Wales	17
5. Hospital admissions involving use of illicit drugs.....	23
5.1 Hospital admissions for poisonings with illicit drugs	23
5.2 Hospital admissions for poisonings by substance type	23
5.2.1 Opioids.....	24
5.2.2 Cannabinoids	24
5.2.3 Cocaine	25
5.2.4 Benzodiazepines	26
5.2.5 Other stimulants	26
5.2.6 Multiple drug use	26
6. Hospital admissions related to substance misuse: psychiatric admissions	29
7. Substance misuse and deprivation	30
8. Specialist substance misuse service assessments.....	32
8.1 Assessments by primary presenting substance and health board area of residence	32
8.2 Individuals new to specialist substance misuse services	35
9. Pre and post-natal health	37
9.1 Conditions originating in the perinatal period: Foetal alcohol syndrome.....	37
9.2 Foetuses and new-borns affected by maternal use of or withdrawal from drugs of addiction	37
10. Children and young people (aged up to 24 years)	39

10.1	Children receiving care and support with parental substance misuse.....	39
10.2	School exclusions due to substance misuse	41
10.3	Hospital admissions related to alcohol amongst children and young people	42
10.4	Hospital admissions for poisoning by illicit drugs in children and young people...	44
10.5	Assessments in specialist substance misuse treatment services amongst children and young people	46
11.	Adults aged 25 to 49 years.....	49
11.1	Hospital admissions for alcohol-specific conditions, adults 25-49 years.....	49
11.2	Hospital admissions for poisoning by illicit drugs in adults aged 25-49	51
11.3	Assessment by substance misuse treatment services, adults aged 25-49 years....	53
12.	Older adults aged 50 years and above	56
12.1	Hospital admissions for alcohol-specific conditions, older adults	56
12.2	Hospital admissions for poisoning with illicit drugs in older adults	57
12.3	Assessment by substance misuse treatment services, older adults.....	59
13.	Self-reported use of illicit drugs in the past year: adults aged 16-59 years	62
14	Injecting drug use: risk behaviours and blood borne viruses.....	64
14.1	People who inject drugs and access Needle and Syringe Programmes.....	64
14.1.1	Young people aged up to 25.....	65
14.1.2	Adults aged 25-49 years	66
14.1.3	Older adults 50+	67
14.2	Risk behaviours amongst people who inject drugs	67
14.2.1	Unlinked Anonymous Monitoring Survey of people who inject drugs.....	67
	Direct and indirect sharing.....	67
	Prevalence of blood borne virus infection amongst people who inject drugs.....	68
14.2.2	Harm Reduction Database: Blood Borne Virus module	69
14.3	Estimates of problematic drug use in Wales	69
15.	Alcohol related deaths.....	71
15.1	Alcohol-specific deaths by year of registration.....	71
15.2	Rates of alcohol-specific deaths in Wales by sex and health board area of residence	72
15.3	Alcohol-attributable mortality	74
16.	Drug related deaths.....	77
16.1	Deaths by drug poisoning and drug misuse deaths by sex and age group	77
16.2	Drug misuse deaths by sex and age group	78

16.3	Drug misuse deaths by substances reported	79
16.4	Drug misuse deaths by health board area.....	80
17.	Police recorded drugs offences and purity of drugs seized by the police: all ages	83
17.1	Recorded drugs offences in Wales	83
17.2	Seizures of illicit drugs in Wales.....	84
17.3	Price and purity of selected illicit drugs – UK	87
18.	Appendices.....	89
	Appendix A: Hospital admissions related to alcohol - definitions	89
	Appendix B: Alcohol related deaths - definitions	98
	Appendix C: Hospital admissions for poisoning by illicit drugs - definitions	101
	Appendix D: Drug related deaths - definitions.....	103
	Appendix E: Confidence intervals.....	106
	Appendix F: Calculating population rates of hospital admission, mortality and other public health indicators	108
	Appendix G: Problem drug use: definitions and estimations of prevalence	110

Contents of Charts, Tables and figures

Charts

Chart 1: Hospital admissions for alcohol-specific conditions and illicit drugs, 2012-13 to 2022-23. Data for 2022-23 is highlighted.	14
Chart 2: Deaths from drug misuse and alcohol-specific conditions, Wales, 2011-2021, by age quintile. Data for 2021 is highlighted.	15
Chart 3: Individuals resident in Wales admitted to hospital with a condition related to illicit drugs, by year and sex 2013-14 to 2022-23.	23
Chart 4: Hospital admissions related to illicit drugs, Welsh residents, European Age Standardised Rate per 100,000, by substance type 2014-15 to 2022-23.	24
Chart 5: Individuals admitted to hospital for poisonings with named illicit drugs, Wales 2013-14 to 2022-23.....	25
Chart 6: Hospital admissions related to illicit drugs, Welsh residents, European Age Standardised Rate per 100,000 population, by drug type and health board area 2022-23	27
Chart 7: Hospital admissions related to illicit drugs, Welsh residents, European Age Standardised Rate per 100,000 population, by year and health board area 2015-16 to 2022-23	28

Chart 8: Unique individual admissions with an alcohol-specific condition in any position by deprivation decile, 2022-23	30
Chart 9: Unique individual admissions with a condition related to illicit drugs in any position by deprivation decile, 2022-23	31
Chart 10: Substance misuse assessments in Wales, by year and primary substance of use reported 2018-19 to 2022-23	32
Chart 11: Substance misuse assessments carried out by services in Wales, by health board 2018-19 to 2022-23	34
Chart 12: Number of individuals assessed by substance misuse services in Wales, by primary substance reported (alcohol or illicit drugs), sex and five-year age bands, 2018-19 to 2022-23.	35
Chart 13: Number of individuals new to service, assessed by substance misuse services in Wales in 2022-23 by primary substance reported (alcohol or illicit drugs) and five-year age bands.	36
Chart 14: Number of hospital admissions for foetuses and neonates affected by maternal use, or withdrawal from, alcohol or other substance dependence, by diagnostic position 2013-14 to 2022-23	38
Chart 15: Children receiving care and support in Wales, percentage with parental substance misuse problems by local authority, as at 31st of March 2022.....	40
Chart 16: Children Receiving Care and Support in Wales, percentage with a substance misuse problem by Local Authority, as at 31st of March 2022.	41
Chart 17: Number of school exclusions related to drugs and alcohol by type of exclusion, 2011-12 to 2021-22. (No data available for 2019-20 academic year as schools were closed during throughout COVID-19 pandemic lockdown).....	42
Chart 18: Hospital admissions for alcohol-specific conditions in Welsh residents aged under 25 years, by sex 2022-23.....	43
Chart 19: Admissions involving young people aged under 25 resident in Wales with an alcohol-specific condition, by year and sex 2012-13 to 2022-23	44
Chart 20: Hospital admissions for conditions related to illicit drugs amongst young people aged up to 24, Welsh resident by sex and age group, 2022-23	45
Chart 21: Hospital admissions for illicit drugs involving young people aged under 25 years and resident in Wales, by year and substance type, 2013-14 to 2022-23	46
Chart 22: Young people aged under 25 assessed by substance misuse services in Wales, by sex, age band and primary substance reported as problematic, 2022-2023.	47
Chart 23: Substance misuse assessments amongst young people under 25, by year and primary problematic substance reported 2018-19 to 2022-23, Wales.....	48
Chart 24: Adults aged 25-49 resident in Wales admitted to hospital with an alcohol-specific condition, by sex, age and diagnostic position of alcohol related condition, 2022-23...	50

Chart 25: Hospital admissions for alcohol-specific conditions amongst adults aged 25-49 resident in Wales, by year and sex, 2012-13 to 2022-23	51
Chart 26: Adults aged 25-49 resident in Wales admitted to hospital with a condition related to illicit drugs, by sex and age group, 2022-23	52
Chart 27: Hospital admissions for named illicit drugs amongst adults aged 25-49, resident in Wales by year and substance type, 2022-23	53
Chart 28: Adults aged 25-49 assessed by substance misuse services in Wales, by sex, age band and primary substance reported as problematic, 2022-23	54
Chart 29: Substance misuse assessments amongst adults aged 25-49, by year and primary problematic substance reported, Wales 2018-19 to 2022-23.	55
Chart 30: Older adults aged 50+ resident in Wales admitted to hospital with an alcohol-specific condition, by age band and sex and age 2022-23	56
Chart 31: Hospital admissions for alcohol-specific conditions amongst older adults aged 50+ resident in Wales by year and sex, 2012-13 to 2022-23	57
Chart 32: Older adults aged 50+ resident in Wales admitted to hospital with a condition related to illicit drugs, by sex and age, 2022-23	58
Chart 33: Hospital admission for conditions related to illicit drugs amongst older adults aged 50+ resident in Wales by year and substance type, 2022-23	59
Chart 34: Older adults (aged 50+) assessed by substance misuse services in Wales, by sex, age band and primary problematic substance reported, 2022-23.	60
Chart 35: Substance misuse assessments amongst older adults aged 50+, by primary problematic substance reported, Wales 2018-19 to 2022-23.	61
Chart 36: Percentage of adults in Wales aged 16-59 self-reporting use of selected illicit drugs in past 12 months, 2010-11 to 2022-23.	62
Chart 37: People who inject drugs and regularly accessing Needle and Syringe Programmes in Wales, by age group, year and substance group, 2017-18 to 2022-23	65
Chart 38: Number of people who inject drugs, regularly accessing NSP services by sex, age group and substance group, Wales, 2022-23.	66
Chart 39: Number of alcohol-specific deaths by registered year of death in Wales 2011-2021.	72
Chart 40: European age standardised rate of alcohol-specific deaths registered in year, Wales, three-year rolling averages, by years and sex	73
Chart 41: European age standardised rate of alcohol-specific deaths, Wales, three-year rolling averages, deaths registered in 2020-22, by health board	74
Chart 42: European Age Standardised Rate of alcohol-attributable deaths, AAF method, Wales, three-year rolling averages, by sex and year of death registered, 2015-17 to 2020-22.	75
Chart 43: European age standardised rate of alcohol-attributable deaths, AAF method, Wales, three-year rolling average, deaths registered in 2020-22, by health board	76

Chart 44: Number of drug poisoning and drug misuse deaths in Wales by year of registration 2012-22	78
Chart 45: Number of drug misuse deaths in Wales by specified age group and sex for deaths registered in 2018-2022.....	79
Chart 46: Number of drug poisoning deaths in Wales in which selected substances were recorded, deaths registered 2013-2022.	80
Chart 47: Rate per 100,000 population of deaths from drug misuse registered in Wales, by health board and year, 2017-2022, along with the national rate for 2022 (red).....	81
Chart 48: European Age Standardised Rate per 100,000 population of drug misuse deaths in Wales by Local Authority, three-year average for 2020-22, along with the national rates for Wales (red).	82
Chart 49: Number of drug offences recorded by police forces in Wales by year and police force, 2018-19 to 2022-23.	83
Chart 50: Rate per 1,000 population of drug offences recorded by Police Forces in Wales by year and police force, 2018-19 to 2022-23, with the Wales average rate (red dot).....	84
Chart 51: Number of seizures by Welsh Police Forces, 2022-23, selected drugs.....	85
Chart 52: Rate of seizures of illicit drugs by Police Forces in Wales per 1,000 population, by police force and Wales average (red dot), 2017-18 to 2022-23.....	86
Chart 53: Typical street price of selected illicit drugs based on law enforcement agency reports, UK, 2010-18.	87
Chart 54: Mean percentage purity of small quantity drug seizures in England and Wales, 2008-18, by selected drugs.	88

Tables

Table 1: Hospital admissions related to alcohol amongst Welsh residents, by indicator, sex and years 2016-17 to 2020-21	16
Table 2: European Age Standardised Rate per 100,000 population for individuals resident in Wales admitted to hospital for an alcohol-specific condition in any position, 2020-21, by Local Authority area	19
Table 3: European Age Standardised Rate per 100,000 population for alcohol-attributable hospital admission amongst for individuals resident in Wales, person based, broad measure, 2020-21, by Local Authority area.....	22
Table 4: Admission to psychiatric hospital and contact with psychiatric specialism (any hospital) related to substance misuse, numbers and proportion (%) of all admissions (person based), 2016-17 to 2020-21.....	29
Table 5: Dimensions used to measure impact of alcohol on populations and healthcare services	89
Table 6: ICD-10 codes for alcohol-specific and alcohol-attributable conditions, as defined by the Alcohol-attributable Fractions (2013)	92
Table 7: ICD-10 codes used to define foetal alcohol syndrome, maternal withdrawal from alcohol and drugs of addiction and alcohol related brain damage in this report	94

Table 8: Details of conditions denoted by the fourth character of ICD-10 codes beginning with 'F'	94
Table 9: Conditions used to calculate alcohol related deaths, Alcohol-attributable Fractions and Office for National Statistics definitions. Note that the AAF conditions used to define alcohol-specific deaths are identical to those used to define alcohol-specific hospital admissions	98
Table 10: ICD-10 codes used to define hospital admissions for poisoning by illicit drugs in the primary position. Full details of ICD-10 codes can be found at: http://apps.who.int/classifications/icd10/browse/2010/en	102
Table 11: ICD-10 codes used by the ONS to define 'drug related deaths'	103
Table 12: Substances listed by the Office for National Statistics as 'new psychoactive substances'	105

Figures

Figure 1: Hospital admissions for an alcohol-specific condition in any position, 2020-21, by Local Authority area, European Age Standardised Rate	18
Figure 2: Alcohol-attributable hospital admissions, Individuals resident in Wales, episode based, broad measure, 2020-21, by Local Authority area, European Age Standardised Rate	21

Introduction

This statistical report provides a summary of routinely reported substance misuse related data currently available for Wales. Evidence is drawn from a number of data sources including Digital Health and Care Wales, Harm Reduction Database (HRD) Wales, Welsh National Database for Substance Misuse (WNDSM), Office for National Statistics (ONS), Local Authority Education services and Home Office data. This report is intended for use alongside the Welsh Government Substance Misuse report on treatment data for the same period to provide a complete profile on the scale and nature of substance misuse, both drugs and alcohol, in Wales.

As in previous years, the report is structured to better explore the evidence relating to substance misuse over the life course, from prenatal and maternal use of drugs and alcohol, through to substance misuse in older adults. The profile will also evidence geographic variations in the health harms related to both drugs and alcohol in terms of hospital admissions, disease rates and deaths, as well as trends over time.

Within Section 1, the report presents population-based data relating to self-reported use and objective measures including hospital admissions in order to provide an overview of the context and extent of health harms and risk behaviour related to drug and alcohol use in Wales. Subsequent sections will then focus on specific age groups: Children and young people (aged 0-24 years), working aged adults (aged 25-49 years) and older adults (aged 50 years and above) and, where data is available, provide a geographic profile by health board and local authority. It is hoped that this report will prove an essential resource both to those responsible for providing and planning health and related services that prevent and/or address the harms associated with drug and alcohol misuse in Wales, as well as those with a broader interest in substance misuse, wider social determinants and implications.

Given the extraordinary circumstances of the COVID-19 pandemic, with substantial disruption to routine services, this report reflects the challenges faced by all health, social care and criminal justice services and individuals using them. As such, the data presented here for 2021-22 should not be interpreted as part of ongoing trend analysis. In addition, one single year's data should not be used to deduce or infer any real changes within the population who use substances.

Executive Summary

Population level trends

- Over twice as many individuals were admitted to hospital for alcohol-specific conditions than for illicit drug use in 2022-23, though both have decreased since the previous year. The number of admissions for alcohol-specific conditions decreased by 6.5 per cent and admissions related to illicit drug use decreased by 11.1 per cent in the last year.
- The number of unique individuals assessed within specialist substance misuse services in Wales increased by 0.8 per cent from the previous year but has decreased by 7.5 per cent since 2018-19. Of all assessments, 48.5 per cent were primary problematic alcohol clients, 44.3 per cent were primary problematic drug clients, and the remaining 7.2 per cent did not have a substance recorded.
- Over the last five years, psychiatric admissions have decreased by 59.1 per cent for alcohol-specific conditions and by 33.9 per cent for conditions related to illicit drugs.
- The proportion of all patients admitted for alcohol-specific conditions living in the most deprived areas was 2.9 times higher than those from the least deprived areas. In relation to illicit drug use, this figure rose to 7.4 times higher.
- Deaths from drug misuse registered in 2022 remain high at 205 deaths, decreasing by only 2.3 per cent from the previous year when the highest number of drug misuse deaths was recorded. Alcohol-specific deaths data were not available for 2022 at a yearly level, though the three-year rolling average has increased by 9.2 per cent in 2020-22 compared to 2019-21.

Children and young people (under 25 years)

- As of 31 March 2022, there were 4,960 children receiving care and support due to parental substance misuse. The number of children receiving care and support whose own substance misuse was identified as a problem was 630, representing 3.7 per cent of all children receiving care and support.
- There was a total of 869 school exclusions as a result of alcohol or drugs amongst school aged children in 2021-22, an increase of 119 per cent from 2020-21 and 16.5 per cent from 2018-19. This is the highest number of exclusions since 2011-12.
- There were 401 admissions involving young people aged under 25 with an alcohol-specific condition in 2022-23, a decrease of 34.6 per cent compared with 2021-22. There was a decrease in admissions for illicit drugs of 11.1 per cent amongst this age cohort in 2022-23.

Adults aged 25-49 years

- Amongst this age cohort, hospital admissions for alcohol-specific conditions and for illicit drug poisonings have decreased by 14.1 per cent and 16.4 per cent on the previous year.
- Opioids continued to account for substantially more hospital admissions than any other illicit substance group, representing 38.3 per cent of admissions for illicit drugs in this age group.
- Drug misuse deaths were highest in the 40-49 age category, accounting for 33.7 per cent of all drug misuse deaths registered in 2022.

Older adults, aged 50 years and above

- Individuals aged 50 and over accounted for 65.0 per cent of all those admitted to hospital for alcohol-specific conditions, and 29.2 per cent of all those admitted to hospital following illicit drug use in 2022-23. These proportions have increased from the previous year.
- Within specialist substance misuse services, alcohol was the most frequently presenting problematic substance, representing 80.1 per cent of assessments. This compares with 13.5 per cent of assessments where opioids were reported as the main substance of use.

3. Headline population trends

3.1 Alcohol-specific and illicit drug poisoning hospital admissions

Hospital admissions are a commonly used measure to assess the harms of alcohol and illicit drugs to individuals. Although likely to be reflective of harms associated with use at the more problematic end of the alcohol and drug use spectrum, figures for hospital admission can provide a useful and, importantly, consistent gauge of these harms over time. Some of the complexities and definitions involved in using hospital admissions data are described in detail in Appendices A to C of this document.

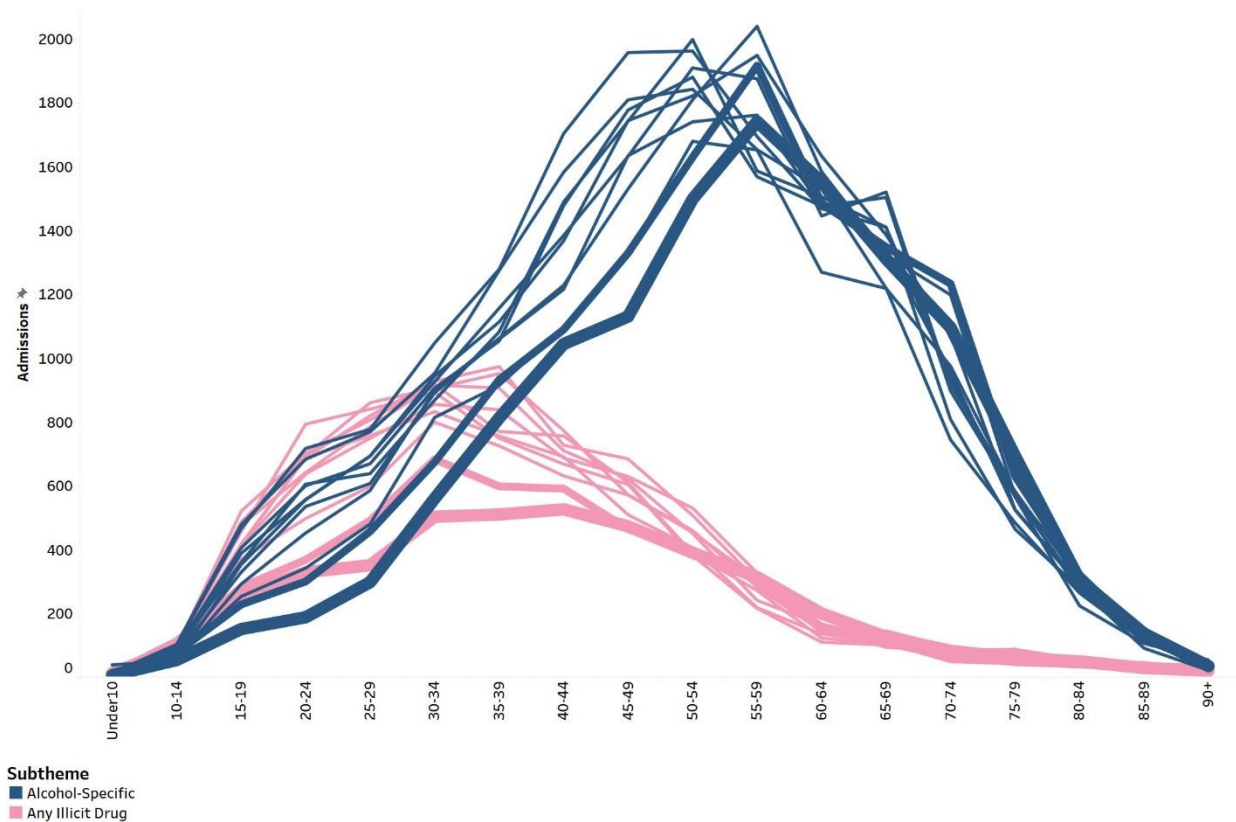
Hospital admissions for alcohol-specific conditions and illicit drugs are shown by year in Chart 1. In 2022-23, there were:

- 4,342 hospital admissions related to illicit drugs involving 3,445 unique individuals.
- 12,628 alcohol-specific admissions involving 8,464 unique individuals.

As can be seen from Chart 1, admissions for different age groups are relatively stable over time. Comparable numbers of admissions for both illicit drugs and alcohol are observed from the 10-14 age groups up to the 35-39 age group, after which admission for illicit drugs fall steadily whilst those for alcohol related conditions continue to rise, peaking in the 55 - 59 age group.

Since 2011-12, the most common age groups admitted for alcohol-specific admissions has been the over 50s. In 2022-23, those aged over 50 accounted for 65.0 per cent of all individuals admitted compared to 30.6 per cent in the 25-49 age group and 4.4 per cent in those aged under 25 years.

For hospital admissions involving illicit drugs, in 2022-23, the most common age groups recorded were 25 – 49 year olds representing 53.6 per cent of all individuals admitted, with a further 29.2 per cent in the over 50 and the remaining 17.1 per cent were under 25 year olds.

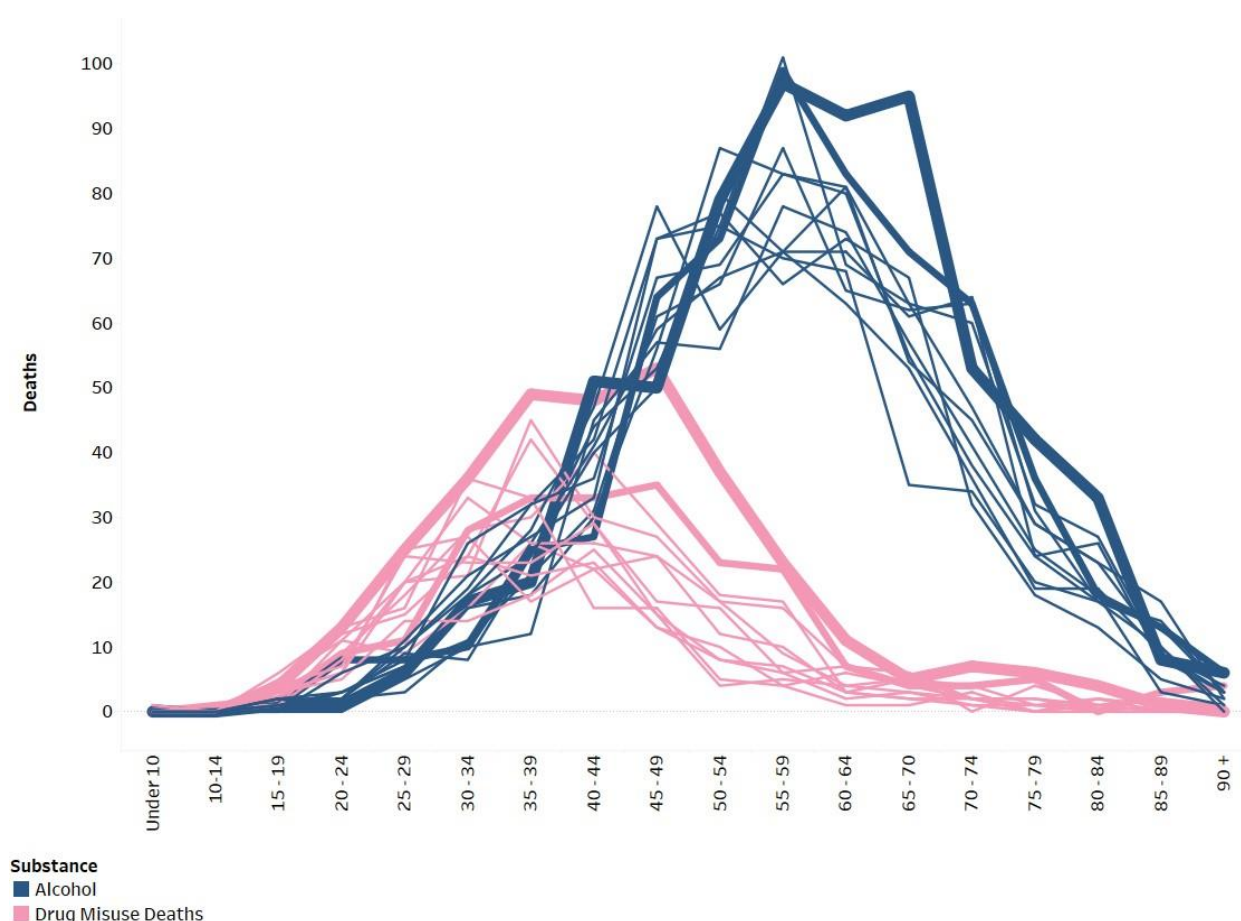


Source: Substance Misuse Programme / Digital Health and Care Wales, 2024

Chart 1: Hospital admissions for alcohol-specific conditions and illicit drugs, 2012-13 to 2022-23. Data for 2022-23 is highlighted.

3.2 Alcohol related deaths and deaths from drug misuse

Only summary data relating to drug mortality was available from ONS at time of publication, so some charts may not be updated. Data relating to alcohol mortality was not available. As in previous years, deaths from illicit drugs and alcohol show a distinct age-peak patterns. In 2021 for illicit drug deaths, the peak was observed in the 45-49 age groups and for alcohol deaths peaking within the 55-59 year age group, as shown in Chart 2. Deaths from illicit drugs occur within age ranges 15-19 to 65-69, with very low numbers recorded in older adults, whilst a wider age range is observed for alcohol deaths, from 20-24 through to 90+ years. All data regarding deaths in this report are recorded by year of death registration.



Source: Office for National Statistics, 2022

Chart 2: Deaths from drug misuse and alcohol-specific conditions, Wales, 2011-2021, by age quintile. Data for 2021 is highlighted.

4. Hospital admissions involving use of alcohol

4.1 Alcohol-specific and alcohol-attributable hospital admissions

'Alcohol-specific conditions' are commonly defined as those conditions, such as alcoholic liver disease, which are 100 per cent attributable to the use of alcohol. Recently, additional measures related to 'alcohol-attributable conditions' have become more frequently reported in literature evaluating alcohol harms. Alcohol-attributable measures include those conditions, which have been evaluated as partially, but not completely, caused by alcohol consumption when considered across the whole population. Alcohol-attributable figures therefore add a further dimension to analysis of alcohol harms. Both alcohol-specific and alcohol-attributable hospital admissions can be described in 'person based' measures (the number of individuals admitted in a given time period, with each counted only once) or 'admission based' measures (where all admissions of all individuals are included, as often one individual may be admitted on more than one occasion in a given year). See Appendix A for a more detailed description.

Table 1 shows detailed figures for key alcohol indicators across Wales for the most recent five years. There were 8,464 unique individuals admitted with an alcohol-specific condition in any diagnostic position in 2022-23, accounting for 12,628 admissions. The number of unique individuals admitted for alcohol-specific conditions has decreased by 18.6 per cent over the last 5 years.

The European age standardised rate (EASR) of alcohol-specific admissions was 271 persons per 100,000 population. The number of unique individuals admitted for an alcohol-attributable condition in 2022-23 was 32,716, remaining stable from the previous year. An alcohol-attributable condition was recorded in the primary position for 11,028 individuals.

Table 1: Hospital admissions related to alcohol amongst Welsh residents, by indicator, sex and years 2018-19 to 2022-23

	Sex	2018-19	2019-20	2020-21	2021-22	2022-23
Number individuals admitted with an alcohol-specific condition in any diagnostic position	All persons	10402	9915	8580	9055	8464
	Male	6698	6457	5520	5864	5575
	Female	3704	3458	3060	3191	2889

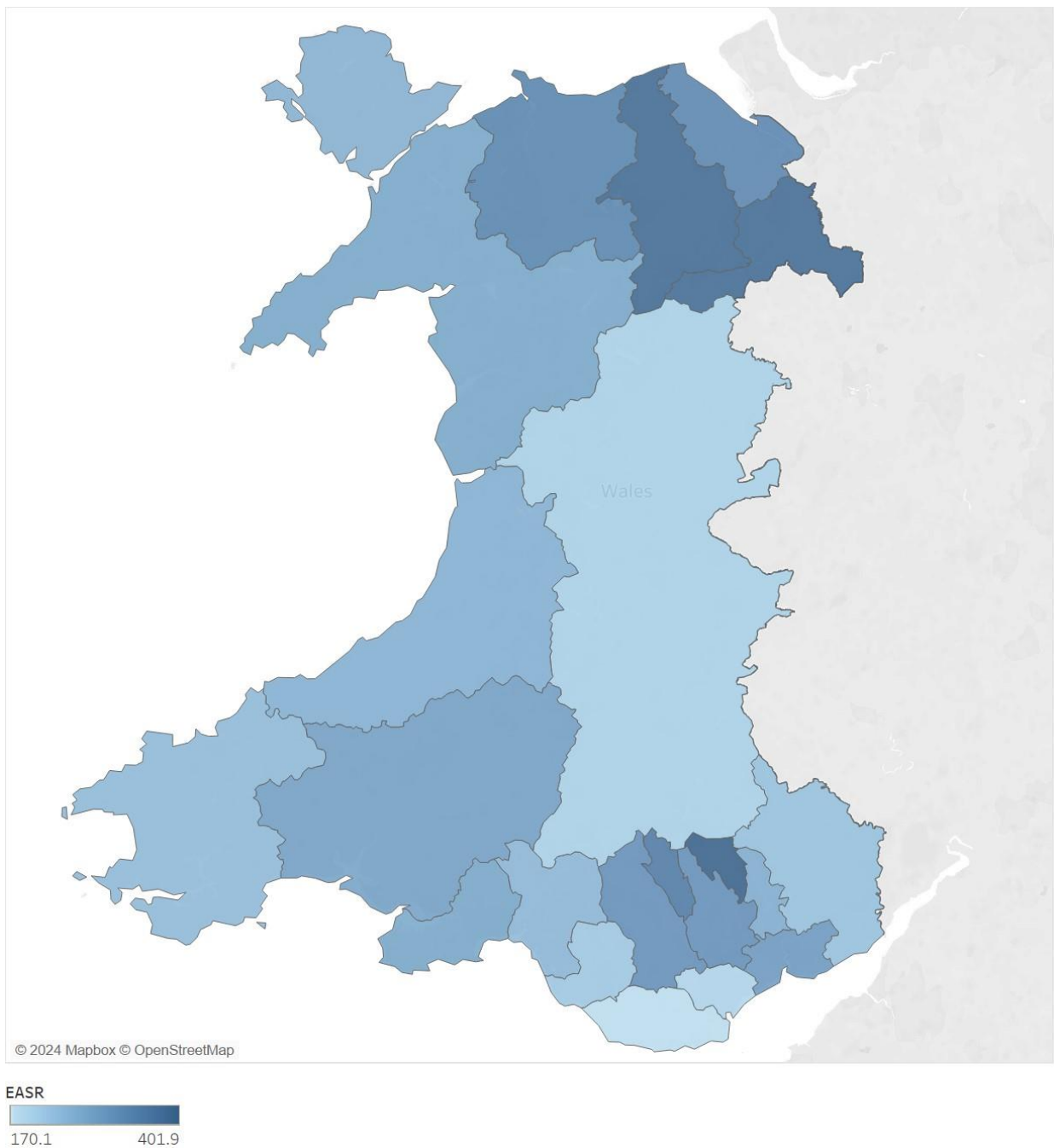
Number admissions to hospital with an alcohol-specific condition in any diagnostic position	All persons	15713	15143	13147	13849	12628
	Male	10081	9946	8560	9023	8364
	Female	5632	5197	4587	4826	4264
Alcohol-attributable admissions, broad measure, person based	All persons	38068	36579	28449	32782	32716
	Male	24463	23498	18354	21042	21036
	Female	13605	13081	10095	11740	11680
Alcohol-attributable admissions, broad measure, episode based	All persons	59675	58103	44986	52654	52118
	Male	38734	37741	29250	34132	33646
	Female	20941	20362	15736	18522	18472

Source: Substance Misuse Programme / Digital Health and Care Wales, 2023

4.2 Alcohol related hospital admissions by local authority area of residence in Wales

There was considerable geographical variation in standardised rates (see Appendix F) of alcohol-specific hospital admissions across Wales as shown in Table 2. Blaenau Gwent Local Authority area had the highest rate with 402 admissions per 100,000 population for alcohol-specific conditions. This is more than 2 times higher than the comparable rate recorded in Vale of Glamorgan, the Local Authority with the lowest rates in Wales at 170 admissions per 100,000 population.

Over the last year, 19 of the 22 Local Authority areas have seen a decrease in rates of individuals admitted with an alcohol-specific condition. The greatest decrease is observed in Torfaen, with a decrease of 21 per cent in 2022-23. However, an increase in rates of individuals admitted with an alcohol-specific condition was observed in 3 Local Authority areas: Gwynedd (4 per cent) Anglesey (7 per cent) and Wrexham (10 per cent). Figure 1 provides a visual representation of the EASR for alcohol-specific hospital admissions in 2022-23 by Local Authority area.



Source: Substance Misuse Programme / Digital Health and Care Wales, 2024

Figure 1: Hospital admissions for an alcohol-specific condition in any position, 2022-23, by Local Authority area, European Age Standardised Rate

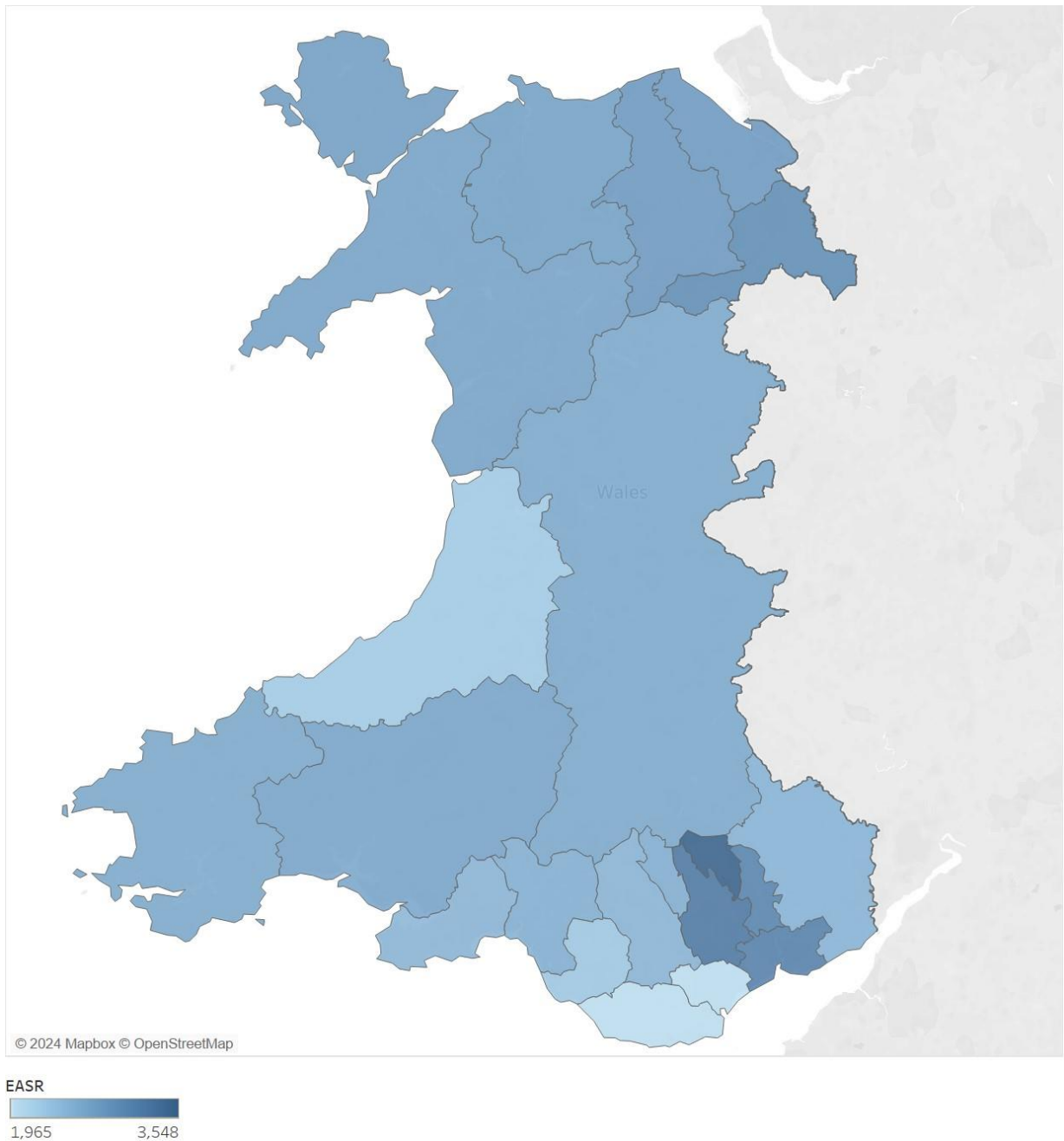
Table 2: European Age Standardised Rate per 100,000 population for individuals resident in Wales admitted to hospital for an alcohol-specific condition in any position, 2022-23, by Local Authority area

Health board area	Local Authority area	EASR per 100,000 population 2022-23	Change since 2021-22	Change since 2018-19
Aneurin Bevan	Blaenau Gwent	402	-8%	-24%
	Caerphilly	312	-8%	-21%
	Monmouthshire	224	-14%	-22%
	Newport	296	-8%	-27%
	Torfaen	262	-21%	-34%
Betsi Cadwaladr	Conwy	334	-5%	-15%
	Denbighshire	386	-3%	-7%
	Flintshire	330	-1%	3%
	Gwynedd	273	4%	-8%
	Isle of Anglesey	253	7%	-20%
	Wrexham	384	10%	16%
Cardiff and Vale	Cardiff	189	-15%	-41%
	Vale of Glamorgan	170	-19%	-48%
Cwm Taf Morgannwg	Merthyr Tydfil	212	-13%	-26%
	Bridgend	355	-3%	-26%
	Rhondda Cynon Taf	312	-9%	-24%
Hywel Dda	Carmarthenshire	284	-12%	-14%
	Ceredigion	256	-6%	-7%
	Pembrokeshire	235	-10%	-23%
Powys	Powys	198	-14%	-29%
Swansea Bay	Neath Port Talbot	243	-15%	-27%
	Swansea	276	-1%	-14%
Wales	Wales	271	-8%	-21%

Source: Substance Misuse Programme / Digital Health and Care Wales, 2023

Figure 2 and Table 3 show the EASR per 100,000 for alcohol-attributable admissions (person-based, broad measure) in 2022-23. As with alcohol-specific admission, Blaenau Gwent was the local authority area with the highest rate of alcohol-attributable admissions at 1,355 person-based admissions per 100,000

population and the lowest rate was recorded in Cardiff with 795 person-based admissions per 100,000 population. Over the last year, 11 of the 22 Local Authority areas have seen a decrease in alcohol-attributable admissions. The highest proportionate rate decrease was observed in Cardiff with a 12 per cent decrease in the last year. Conversely, 10 of the remaining Local Authority areas have seen an increase in alcohol-attributable admissions with an increase of 11 percent observed in Anglesey, the Local Authority with the highest increase.



Source: Substance Misuse Programme / Digital Health and Care Wales, 2024

Figure 2: Alcohol-attributable hospital admissions, Individuals resident in Wales, episode based, broad measure, 2022-23, by Local Authority area, European Age Standardised Rate

Table 3: European Age Standardised Rate per 100,000 population for alcohol-attributable hospital admission for individuals resident in Wales, person based, broad measure, 2022-23, by Local Authority area.

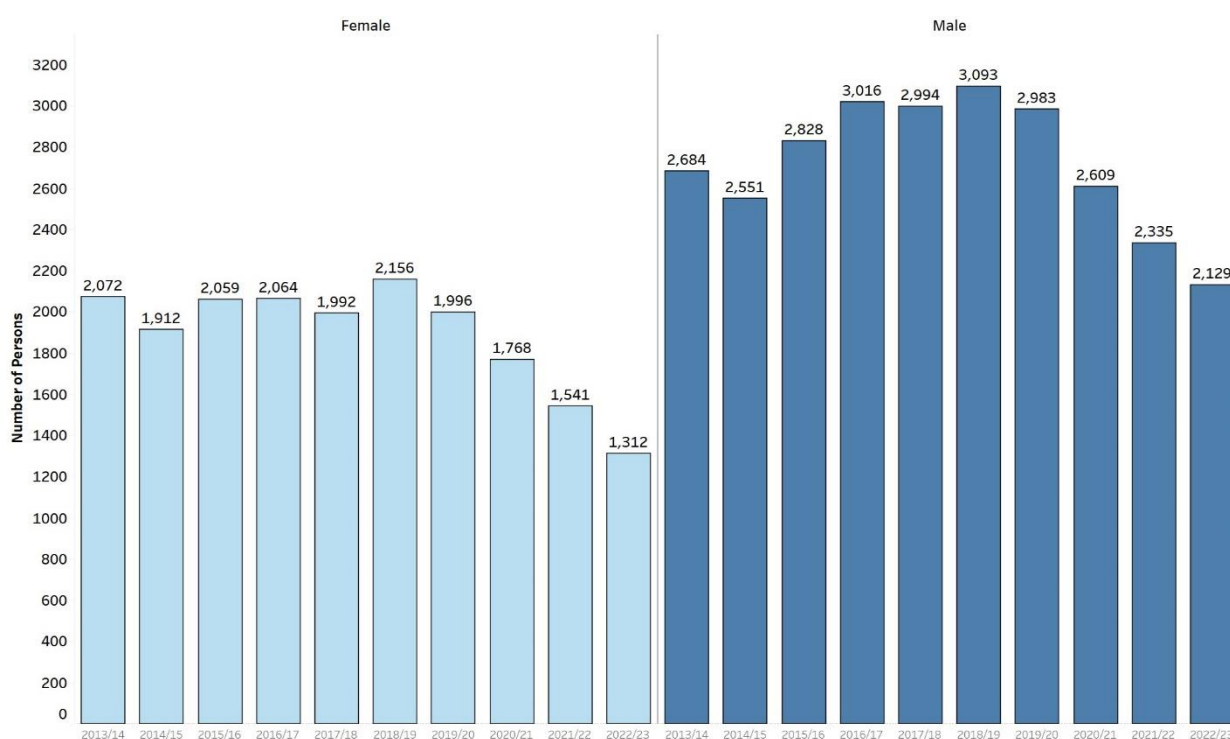
Health board area	Local Authority area	EASR per 100,000 population 2022-23	Change since 2021-22	Change since 2018-19
Aneurin Bevan	Blaenau Gwent	1355	-5%	-15%
	Caerphilly	1228	1%	-13%
	Monmouthshire	957	-1%	-10%
	Newport	1184	1%	-9%
	Torfaen	1177	-2%	-15%
Betsi Cadwaladr	Conwy	1011	1%	-12%
	Denbighshire	1097	0%	-11%
	Flintshire	1062	3%	-4%
	Gwynedd	994	8%	-6%
	Isle of Anglesey	1004	11%	-5%
	Wrexham	1154	5%	-1%
Cardiff and Vale	Cardiff	795	-12%	-34%
	Vale of Glamorgan	796	-11%	-34%
Cwm Taf Morgannwg	Merthyr Tydfil	937	-3%	-22%
	Bridgend	1046	-7%	-30%
	Rhondda Cynon Taf	1003	-5%	-28%
Hywel Dda	Carmarthenshire	1049	-1%	-15%
	Ceredigion	884	4%	-17%
	Pembrokeshire	929	1%	-14%
Powys	Powys	985	1%	-16%
Swansea Bay	Neath Port Talbot	1025	-4%	-16%
	Swansea	992	-1%	-16%
Wales	Wales	1007	-1%	-17%

Source: Substance Misuse Programme / Digital Health and Care Wales, 2023

5. Hospital admissions involving use of illicit drugs

5.1 Hospital admissions for poisonings with illicit drugs

Overall, the number of hospital admissions for poisonings with named illicit drugs has decreased by 10.6 per cent in the last year, from 4,859 in 2021-22 to 4,342 in 2022-23. Compared to 2018-19 there has been a 27.6 per cent decrease in illicit drug admissions. The number of unique individuals admitted for illicit drugs in 2022-23 was 3,445, a decrease of 11.1 per cent from 3,877 in 2021-22. The number of both males and females admitted has decreased over the last four years. The number of individuals (with available sex data) admitted to hospital for illicit drugs over the last nine years is shown in Chart 3.



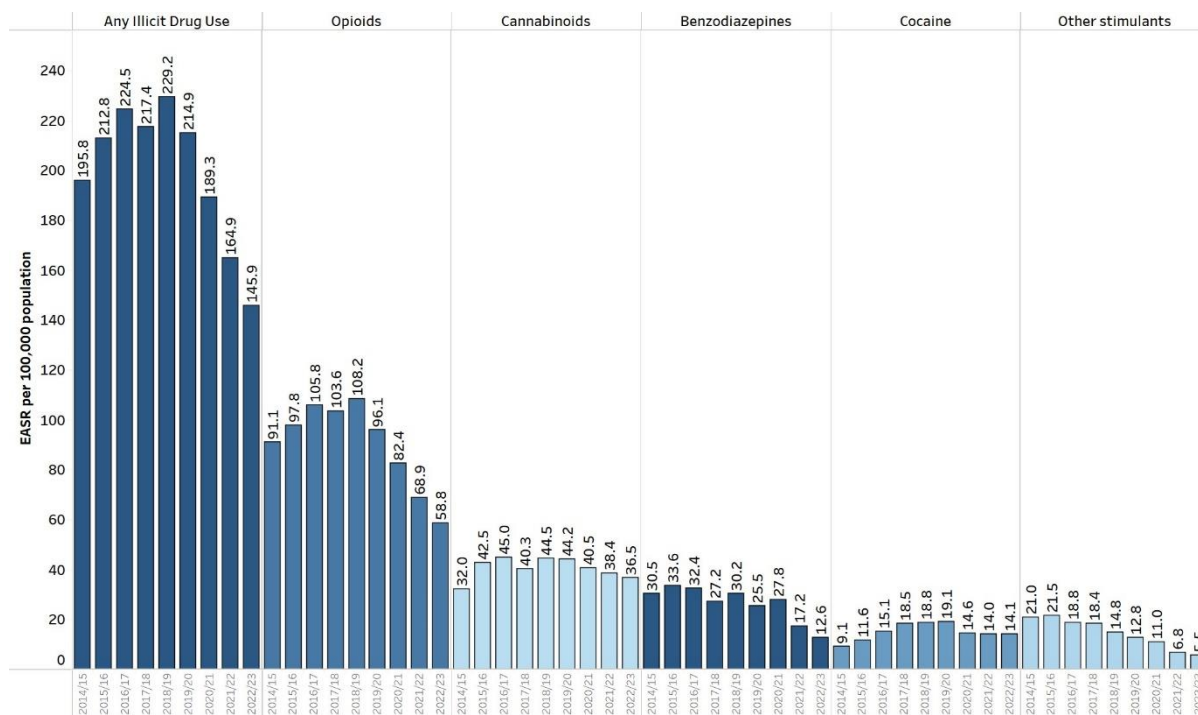
Source: Substance Misuse Programme / Digital Health and Care Wales, 2024

Chart 3: Individuals resident in Wales admitted to hospital with a condition related to illicit drugs, by year and sex 2013-14 to 2022-23.

5.2 Hospital admissions for poisonings by substance type

As shown in Chart 4, the EASR per 100,000 population for hospital admissions related to illicit drugs has decreased over the last four years recording a new low of 145.9 hospital admissions for the year 2022-2023. Whilst there is no consistent trend between years, there has been a 25.5 per cent overall decrease in the rate of admissions since 2014-15. The EASR per 100,000 admissions for opioids decreased

by 14.6 per cent in 2022-23 compared to the previous year. The EASR for admissions for cannabinoids, benzodiazepines, and other stimulants decreased again this year. However, the EASR per 100,000 admissions for cocaine increased from 14.0 to 14.1, remaining stable from the previous year.



Source: Substance Misuse Programme / Digital Health and Care Wales, 2024

Chart 4: Hospital admissions related to illicit drugs, Welsh residents, European Age Standardised Rate per 100,000, by substance type 2014-15 to 2022-23.

5.2.1 Opioids

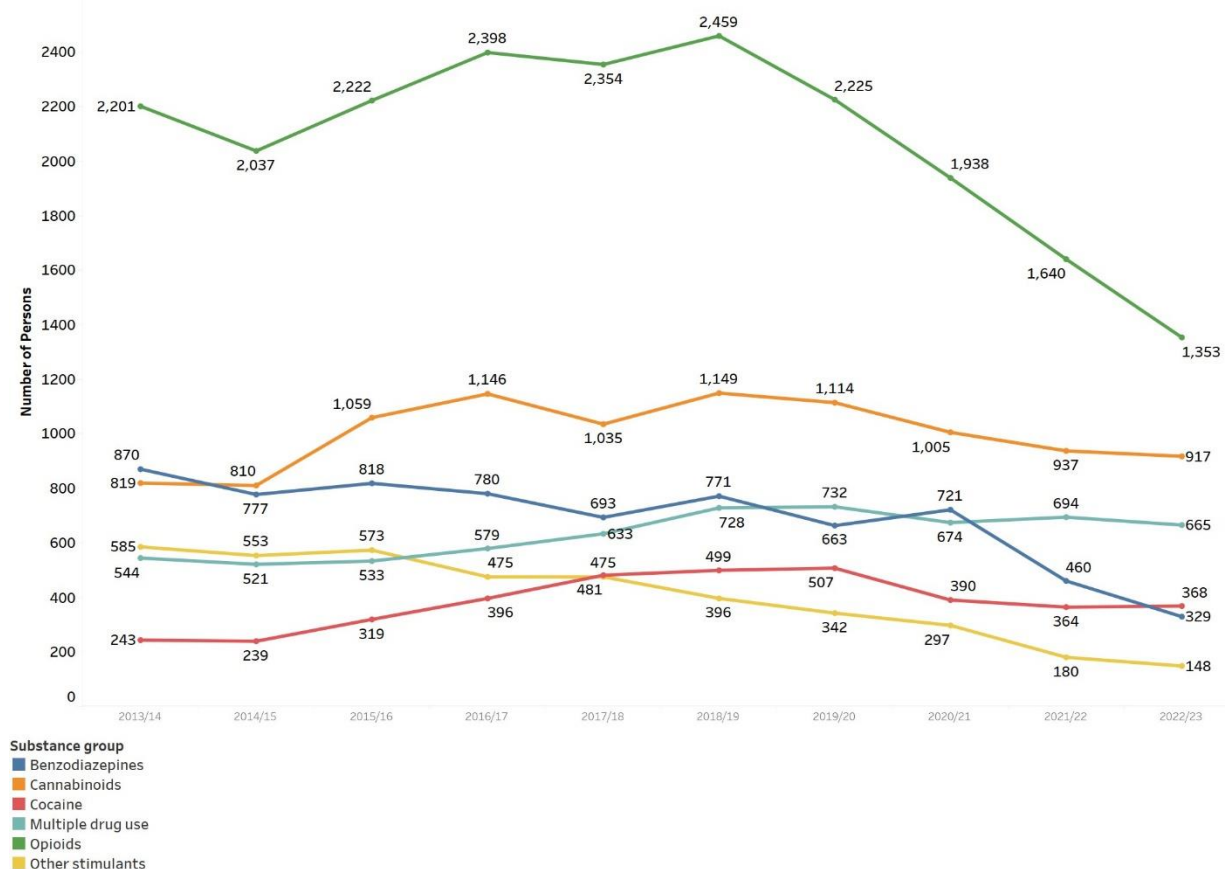
Opioids remain the substance group related to the highest number of individuals admitted to hospital and the highest number of admissions for illicit drugs. In 2022-23, a total of 1,353 individuals were admitted, accounting for a total of 1,736 opioid related admissions, representing a decrease of 17.5 per cent and 14.1 per cent respectively on the previous year. The EASR for opioid related admissions in 2022-23 was 58.8 admissions per 100,000 population, 14.6 per cent lower than the rate recorded last year.

5.2.2 Cannabinoids

Cannabinoids are the second highest substance group with 1,097 hospital admissions in 2022-23 relating to 917 individuals admitted. There was a decrease of 3.9 per cent in the number of admissions compared to the previous year (1,141 admissions in 2021-22). The EASR for cannabinoid admissions was 36.5 per 100,000

population in 2022-23, continuing a steady decline over the last 5 years from 44.5 per 100,000 population in 2018-19.

It is important to note that no distinction is possible in hospital admission data for differentiation between cannabinoid products: cannabis resin, stronger strains of herbal cannabis (i.e. 'skunk'); or newer forms of synthetic cannabinoid receptor agonists (SCRAs), such as 'Spice'. WEDINOS, a project testing and profiling substances submitted from across the UK provides evidence of a substantial market for SCRAs in Wales amongst vulnerable populations, particularly those who are incarcerated.¹ In addition, the EMCDDA have reported increases in the potency of both the resin and herb forms of cannabis over the last 10 years.²



Source: Substance Misuse Programme / Digital Health and Care Wales, 2024

Chart 5: Individuals admitted to hospital for poisonings with named illicit drugs, Wales 2013-14 to 2022-23.

5.2.3 Cocaine

1 WEDINOS (2023) Philtre annual report, 2022-2023. Public Health Wales. Available at <https://www.wedinos.org/resources/downloads/Annual-Report-22-23-English.pdf>

2 EMCDDA 2019: European Drug Report – Trends and developments 2018. Available at http://www.emcdda.europa.eu/emcdda-home-page_en

In the past, the largest increases in hospital admissions for illicit drugs had involved cocaine, however, admissions decreased over the past 3 years with a slight increase in the most recent year. In 2022-23 there were 412 cocaine related admissions involving 368 individuals. Since 2014-15, the EASR has also increased from 9.1 to 14.1 admissions per 100,000 population. This is a result of the increase in availability and purity of both powdered and crack cocaine as detailed later in this report and evidenced by the EMCDDA.^{2,3} The decrease in admissions since 2020-21 follows a trend across almost all substance groups and may be attributed to restrictions due to COVID.

5.2.4 Benzodiazepines

In 2022-23 there were 378 benzodiazepine related admissions involving 329 individuals. The EASR was 12.6 admissions per 100,000 population. Compared to last year there has been a 25.6 per cent decrease in the number of admissions related to benzodiazepines.

5.2.5 Other stimulants

In 2022-23, there were 164 hospital admissions involving 148 individuals. The number of admissions relating to the category 'other stimulants' has decreased by 18.0 per cent over the previous year, from 200 in 2021-22. Over the last eight years admissions related to 'other stimulants' have decreased by 74.6 per cent.

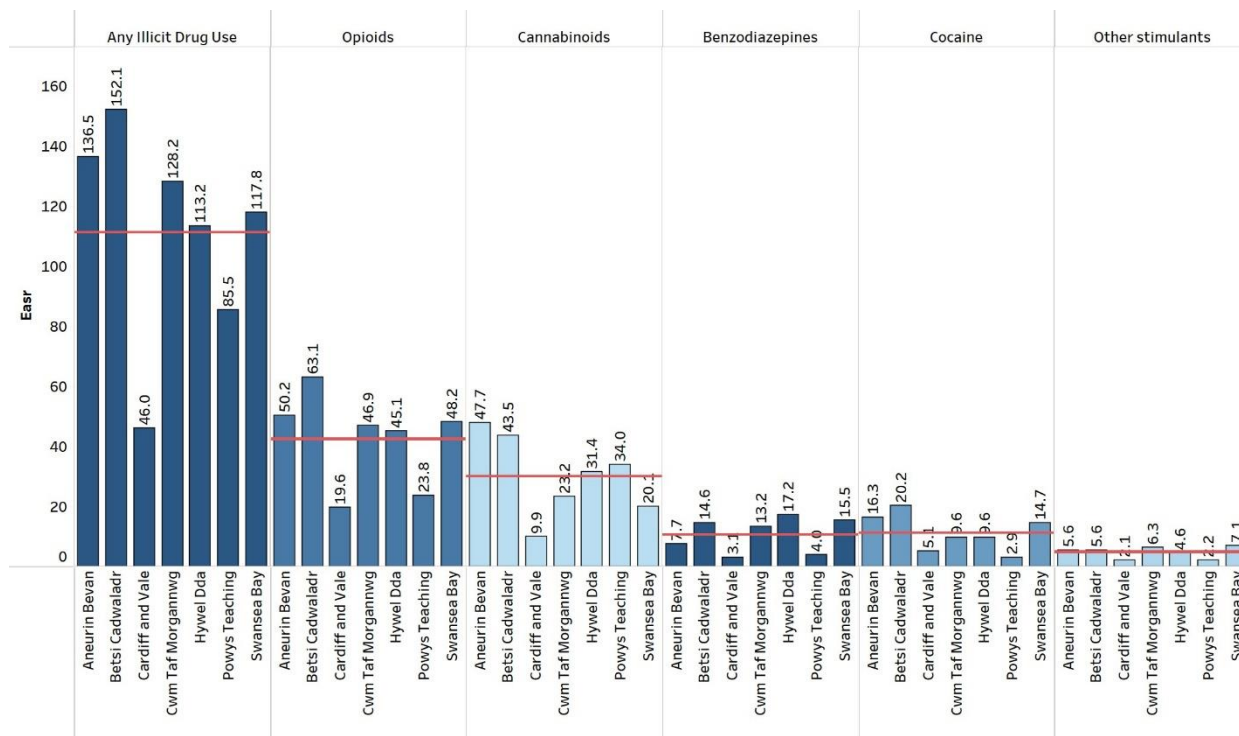
5.2.6 Multiple drug use

In 2022-23, there were 665 individuals admitted where multiple drugs were recorded, accounting for 19.3 per cent of all admissions for illicit drugs. The number of admissions in which multiple drugs were recorded have increased by 23.5 per cent since 2015-16.

³ See page 68

5.3 Illicit drug related hospital admissions by health board area of residence in Wales

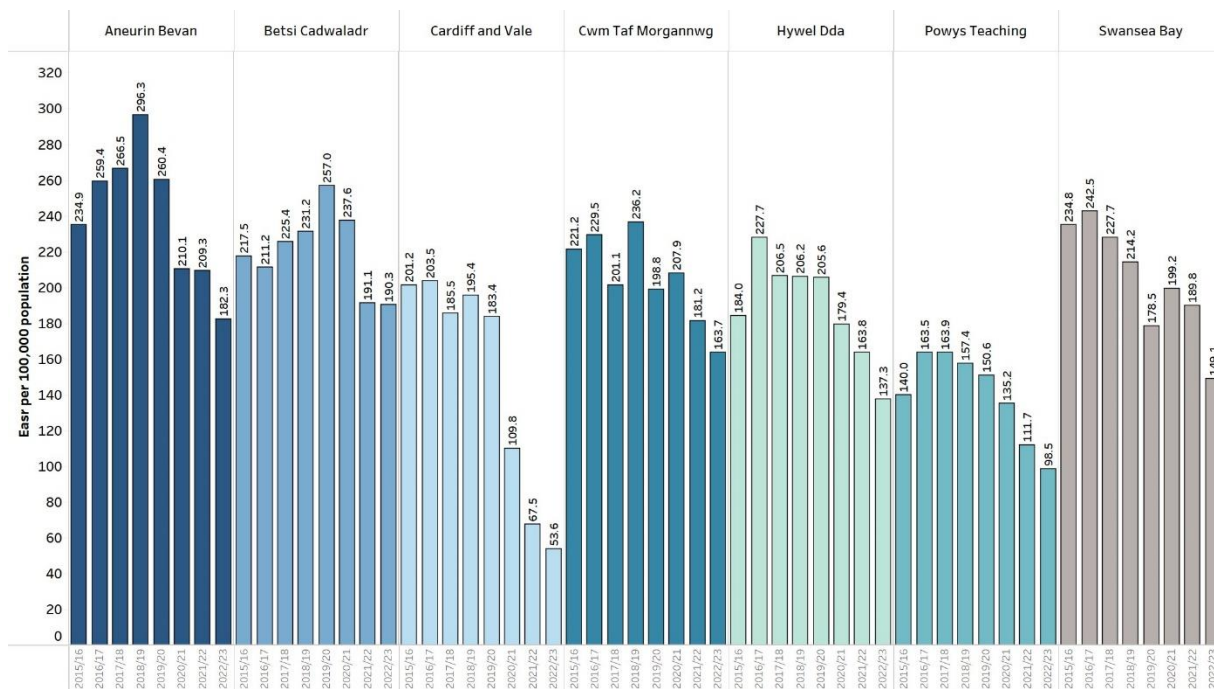
As with hospital admissions related to alcohol, there was geographic variation in illicit drug related admissions. As shown in Chart 6, Betsi Cadwaladr University Health Board (BCUHB) area has the highest EASR of admissions related to illicit drugs (152.1 per 100,000 population) and along with all health boards other than Cardiff and Vale and Powys health board areas, had rates above the Wales average in 2022-23.



Source: Substance Misuse Programme / Digital Health and Care Wales, 2024

Chart 6: Hospital admissions related to illicit drugs, Welsh residents, European Age Standardised Rate per 100,000 population, by drug type and health board area 2022-23

Chart 7 shows the rate of hospital admissions for illicit drugs by health board over the last eight years. Admissions decreased across all health boards in Wales in 2022-23 compared to 2021-2022. The rate of admissions has decreased in Swansea Bay University Health Board (SBUHB) again this year after the first increase in four years in 2020-21. Rates appear to be remaining constant in BCUHB.



Source: Substance Misuse Programme / Digital Health and Care Wales, 2024

Chart 7: Hospital admissions related to illicit drugs, Welsh residents, European Age Standardised Rate per 100,000 population, by year and health board area 2015-16 to 2022-23

6. Hospital admissions related to substance misuse: psychiatric admissions

Substance misuse related conditions that lead to hospital admission may be complex and long-term and may relate to a range of medical specialties. Table 4 shows the number of admissions that required psychiatric treatment. Admissions involving illicit drugs were considerably more likely to involve psychiatric treatment than those for alcohol-specific conditions. The proportion of admissions receiving psychiatric treatment has decreased in 2022-23 from the previous year for both alcohol and illicit drug related admissions.

Table 4: Admission to psychiatric hospital and contact with psychiatric specialism (any hospital) related to substance misuse, numbers and proportion (%) of all admissions (person based), 2018-19 to 2022-23

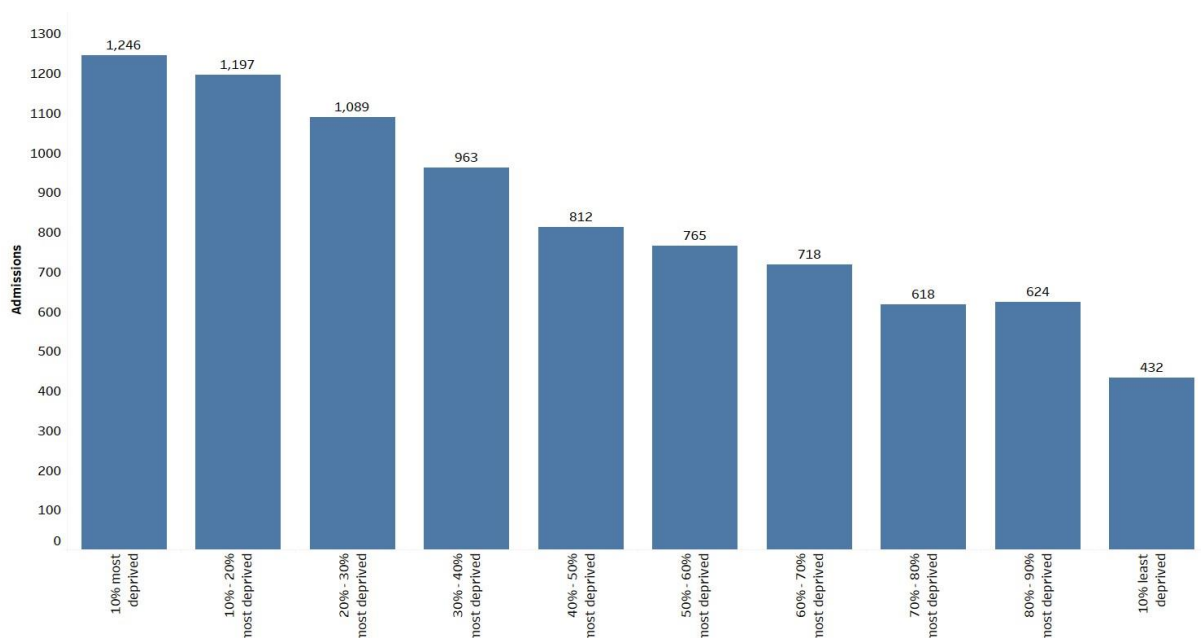
	2018-19	2019 -20	2020-21	2021-22	2022-23
Alcohol-specific admissions (any diagnostic position)	690 (6.6%)	570 (5.7%)	422 (4.9%)	309 (3.4%)	282 (3.3%)
Illicit drug admissions (any diagnostic position)	693 (13.2%)	708 (14.2%)	591 (13.5%)	526 (13.6%)	458 (13.3%)

Source: Substance Misuse Programme / Digital Health and Care Wales, 2024

7. Substance misuse and deprivation

The Welsh Government produces an index of multiple deprivation⁴ which ranks every lower super output area (LSOA, small geographical areas with stable populations of about 1,500) on measures of deprivation.⁵ These measures allow every address in Wales to be allocated to a decile of deprivation and ranked from 10 per cent most deprived to 10 per cent least deprived areas.

Chart 8 and Chart 9 show unique individual admissions with alcohol-specific and illicit drug related conditions respectively by each deprivation decile.

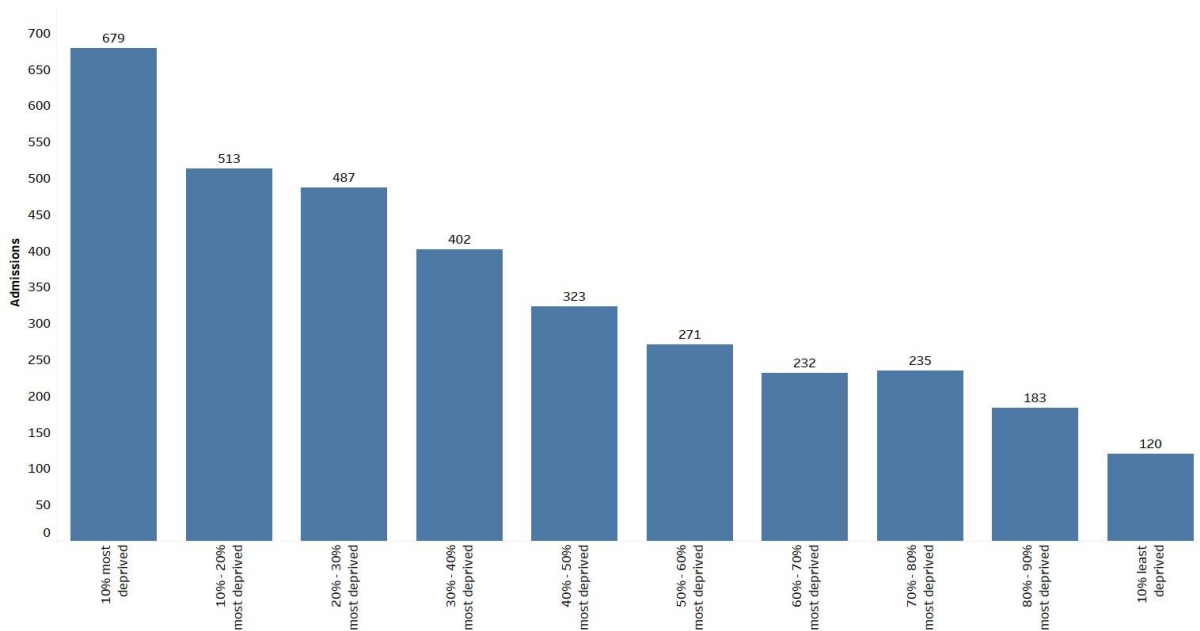


Source: Substance Misuse Programme / Digital Health and Care Wales, 2024

Chart 8: Unique individual admissions with an alcohol-specific condition in any position by deprivation decile, 2022-23

⁴ Welsh Index of Multiple Deprivation (WIMD), <http://gov.wales/statistics-and-research/welsh-index-multiple-deprivation/?lang=en>

⁵ Note that deprivation is a measure of the area in which an individual lives, rather than an evaluation of their particular circumstances.



Source: Substance Misuse Programme / Digital Health and Care Wales, 2024

Chart 9: Unique individual admissions with a condition related to illicit drugs in any position by deprivation decile, 2022-23

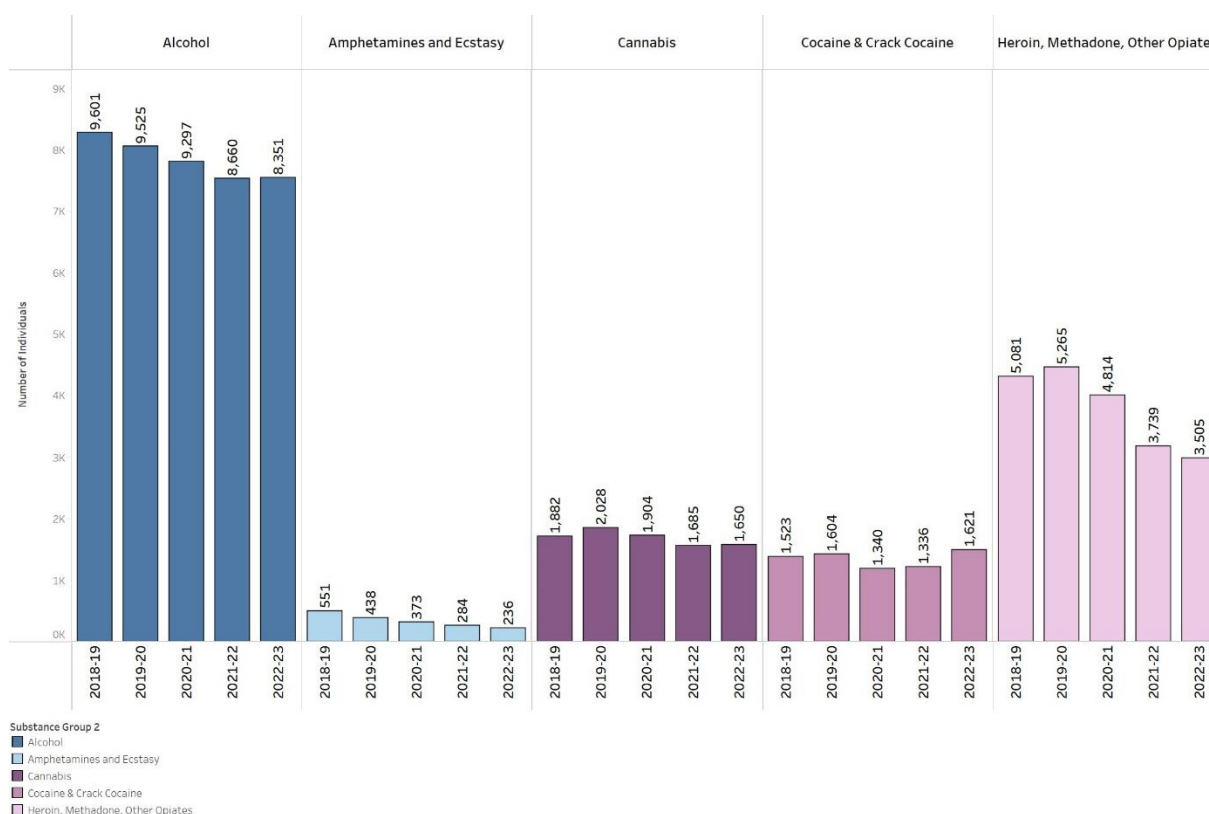
The two charts clearly show the relationship between level of deprivation and individuals in Wales admitted to hospital in relation to alcohol or illicit drugs in 2022-23. The proportion of all patients admitted for alcohol-specific conditions who lived in the 10 per cent of most deprived areas was 2.9 times higher than those from the least deprived areas. Amongst those admitted for conditions related to use of illicit drugs, the contrast was even more striking - admissions were 7.4 times higher amongst those from the most deprived areas compared to least deprived, perhaps reflecting the additional contribution of factors including criminalisation on deprivation and the associated impact on health and risk behaviours.

8. Specialist substance misuse service assessments

8.1 Assessments by primary presenting substance and health board area of residence

There were 17,246 assessments within substance misuse services in Wales in 2022-23, representing a decrease of 2.2 per cent compared to the previous year (17,644 assessments). Assessments in 2022-23 are 10.8 per cent lower than 5 years ago (19,344 assessments in 2018-19). These assessments involved 15,538 unique individuals, an increase from 15,413 in the previous year (0.8 per cent). The number of unique individuals completing assessment within substance misuse services has decreased by 7.5 per cent since 2018-19. Of the individuals assessed:

- 7,532 (48.5 per cent) were primary problematic alcohol clients, of which 50.6 per cent (n=3,813) were male.
- 6,883 (44.3 per cent) were primary problematic drug clients of which 42.7 per cent (n=2,943) were male.
- 1,123 (7.2 per cent) did not have a substance recorded.



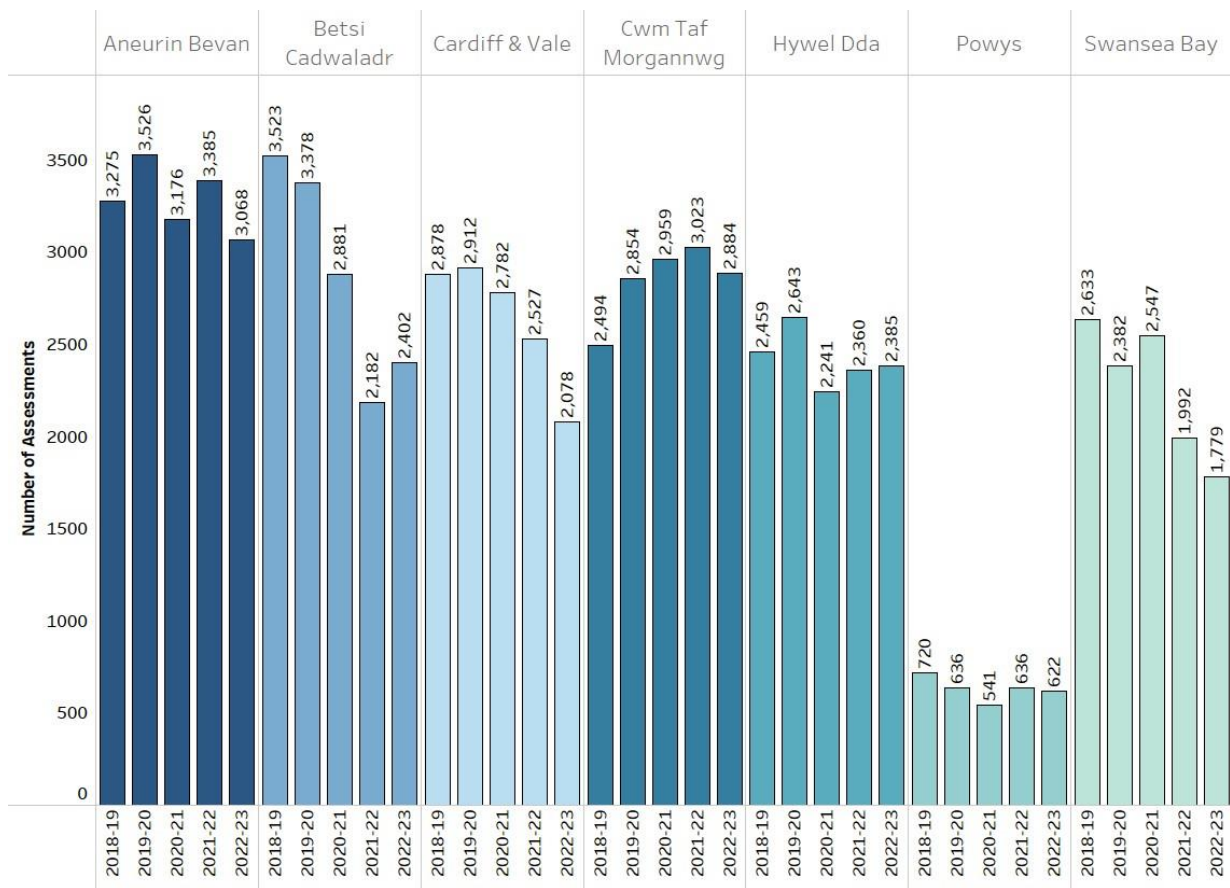
Source: Welsh National Database for Substance Misuse, 2023

Chart 10: Substance misuse assessments in Wales, by year and primary substance of use reported 2018-19 to 2022-23

Amongst assessments for problematic drug use:

- Opioids were cited as the most prevalent primary substance with 3,505 assessments (50.9 per cent), representing a decrease of 6.3 per cent on the previous year (3,739 assessments). Of these, 2,784 assessments (79.4 per cent) had heroin cited as the primary substance.
- Cannabis was the next most frequently reported substance with 1,650 assessments (23.9 per cent) down from 1,685 assessments the previous year. However, there has been an overall decrease of 232 (12.3 per cent) across the last five years.
- The number of assessments with cocaine, including crack cocaine, as the primary substance has increased from 1,523 in 2018-19 to 1,621 in 2022-23. This is an increase of 6.4 per cent and represents 23.5 per cent of all drug referrals in 2022-23.

Changes in the number of substance misuse assessments over the last five years by health board area is shown in Chart 11. Assessments in Betsi Cadwaladr University Health Board increased by 10 per cent from 2021-22. Whereas assessments in Cardiff and Vale and Swansea Bay University Health Boards continue to decline by 25.3 per cent 18.4 per cent respectively from 2020-21 to 2022-23.



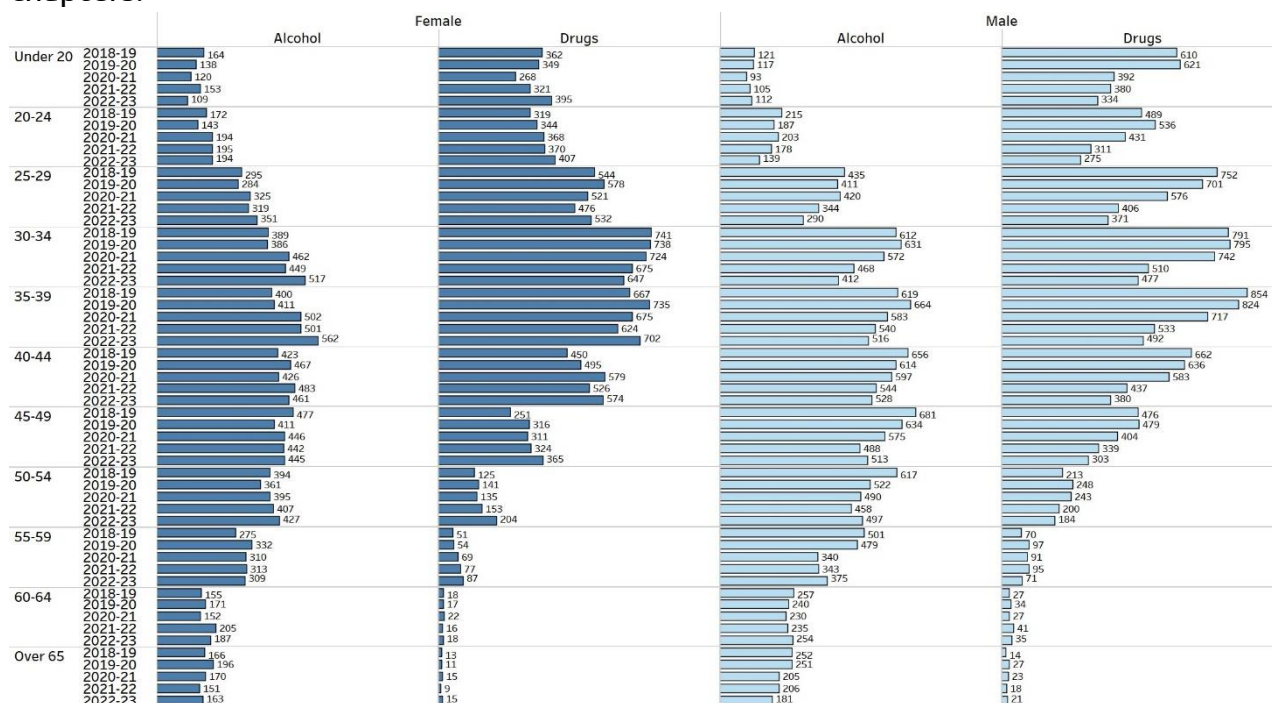
Source: Welsh National Database for Substance Misuse, 2023

Chart 11: Substance misuse assessments carried out by services in Wales, by health board 2018-19 to 2022-23

Substance misuse assessments for 2022-23 by age bands and sex are shown in Chart 12. As is clear from the chart, the age of individuals assessed for alcohol support and treatment is higher than for drugs. Amongst females, the number of assessments for illicit drugs has increased by 9.4 percent over the last five years.

Since 2018-19 there has been a 42.7 per cent decrease in assessments for illicit substances among males. The substance profile for assessments within specialist substance misuse services differ considerably with age as shown in subsequent

chapters.

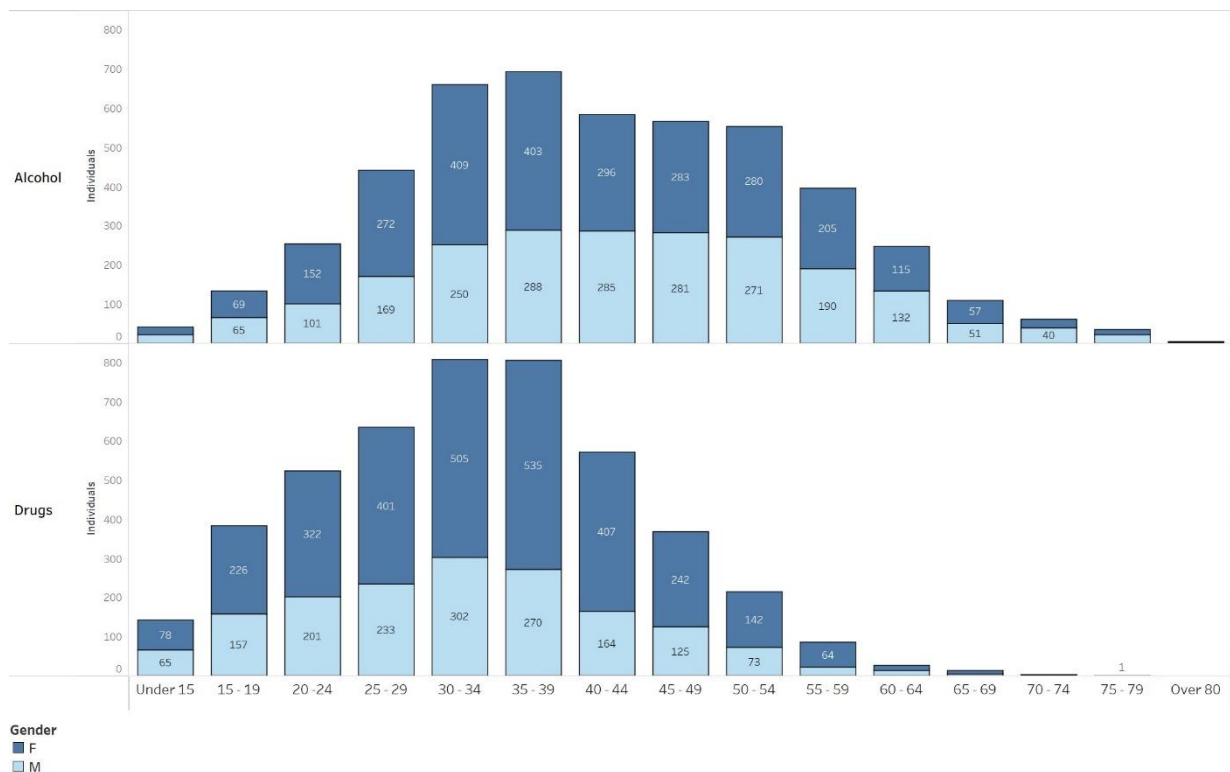


Source: Welsh National Database for Substance Misuse, 2023

Chart 12: Number of individuals assessed by substance misuse services in Wales, by primary substance reported (alcohol or illicit drugs), sex and five-year age bands, 2018-19 to 2022-23.

8.2 Individuals new to specialist substance misuse services

There were 9,508 individuals assessed in 2022-23 who had not previously been recorded as having an assessment with a substance misuse service in Wales, representing 61.2 per cent of all individuals assessed in that year. Amongst those new to services, there were 4,768 assessments for primary problematic alcohol use and 4,580 assessments for primary problematic drug use. The remaining 160 did not have a substance recorded. The number of unique individuals new to services are shown in Chart 13 by primary problematic substance type.



Source: Welsh National Database for Substance Misuse, 2023

Chart 13: Number of individuals new to service, assessed by substance misuse services in Wales in 2022-23 by primary substance reported (alcohol or illicit drugs) and five-year age bands.

The proportion of individuals assessed in 2022-23 who were new to services varied by primary problematic substance. Amongst those presenting with primary problematic drug use, almost 40 per cent (37 per cent) were aged up to 29 years. Assessments reduced in all age groups above 35-39. However, amongst primary problematic alcohol service users, assessments amongst those new to services were more dispersed across the age groups. Over two thirds, (71.3 per cent), of new assessments occurred in those aged up to 44 years, with numbers of assessments remaining elevated up to the 50-54 year age group and a gradual reduction observed thereafter. The proportion of males and females new to services varied across the primary problematic substance groups: for alcohol assessments 45.5 per cent (n=2,169) were male; for drug assessments 35.7 per cent were male (n=1,635).

9. Pre and post-natal health

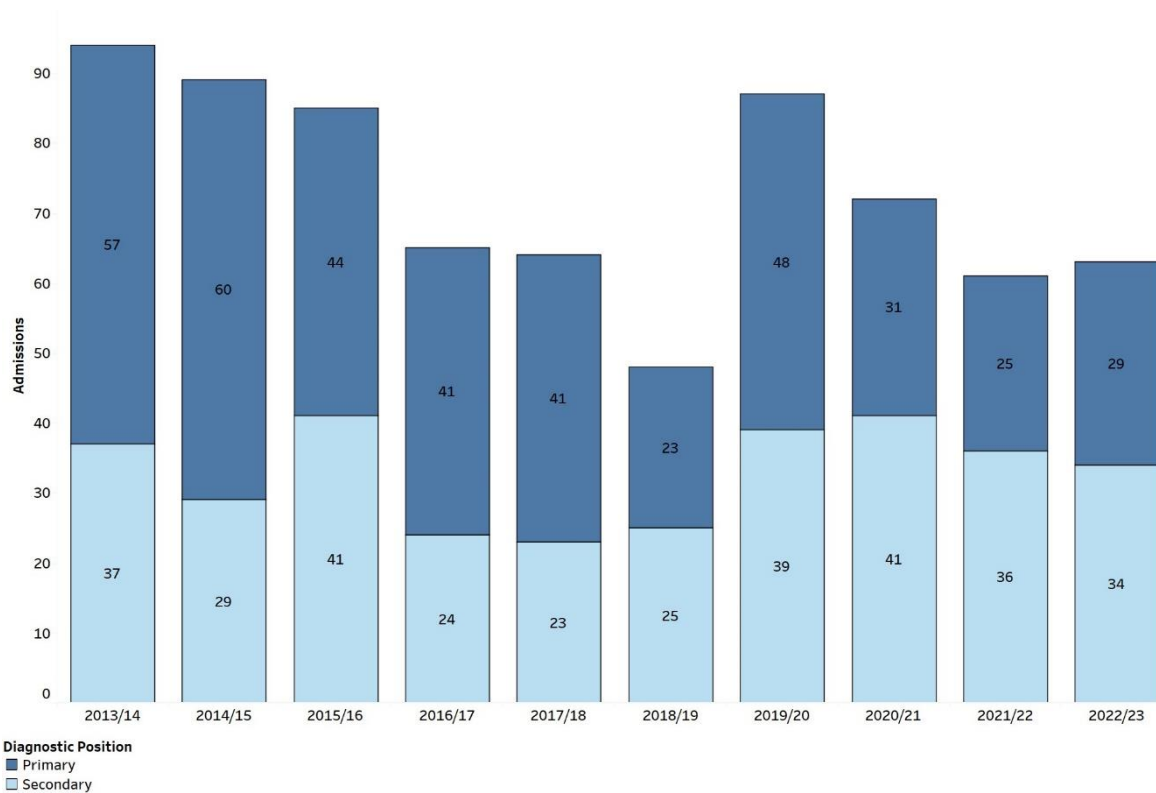
9.1 Conditions originating in the perinatal period: Foetal alcohol syndrome

Foetal alcohol syndrome (FAS) arises from maternal use of alcohol during pregnancy,⁶ a serious condition that typically results in affected children experiencing restricted growth, learning and behavioural disorders and physiological problems.

9.2 Foetuses and new-borns affected by maternal use of or withdrawal from substance dependence

Hospital admissions for foetuses and neonates affected by maternal use, or withdrawal from, alcohol or other substance dependency have declined over recent years (see Appendix A for detailed definition). In 2022-23, however, there were 63 admissions of Welsh residents in which these conditions were recorded in any diagnostic position, with a relevant condition recorded in the primary position in 29 cases. With no clear trend over the last decade, admissions are shown in Chart 14.

⁶ Further information on Foetal Alcohol Syndrome and related conditions is available at <http://www.nhs.uk/Conditions/foetal-alcohol-syndrome/Pages/Introduction.aspx>



Source: Substance Misuse Programme / Digital Health and Care Wales, 2024

Chart 14: Number of hospital admissions for fetuses and neonates affected by maternal use, or withdrawal from, alcohol or other substance dependence, by diagnostic position 2013-14 to 2022-23

10. Children and young people (aged up to 24 years)

10.1 Children receiving care and support with parental substance misuse

Following the introduction of the Social Services and Well-being (Wales) Act 2014, the Children in Need Census has been changed to the 'Children Receiving Care and Support' Census. Due to the change in methodology, figures should not be compared with data prior to 2017. Furthermore, the statistics presented are still classified as experimental by the Welsh Government and caution should be taken in their interpretation.

In 2021-22 there were 17,190 children receiving care and support in Wales, up from 16,675 in 2020-21,^{7,8,9} an increase of 3.1 per cent. Of these, there were 4,960 children, 28.9 per cent, with parental substance misuse listed as a factor in their referral (up from 30.9 per cent in 2021).

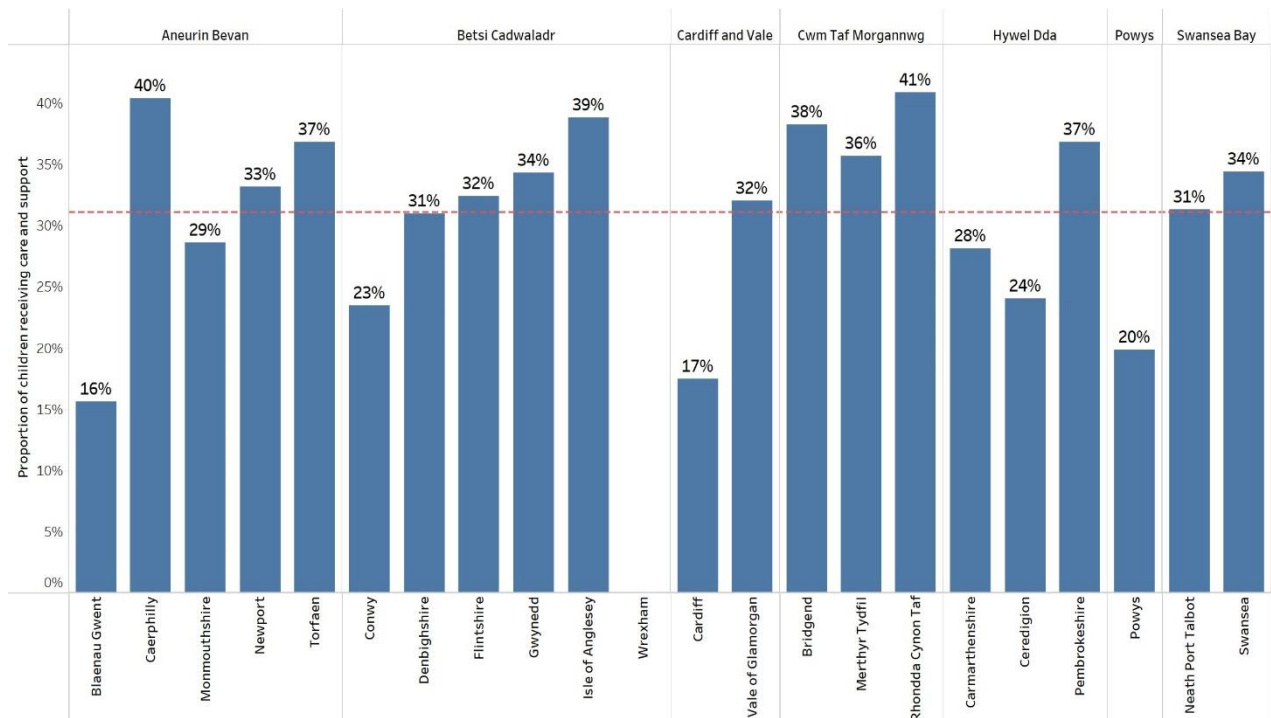
There is considerable variation between local authorities in the proportion of children receiving care and support with parental substance misuse, as shown in Chart 15, with the Wales average (31 per cent) indicated by the red line. In 2021-22, the Local Authorities with the greatest number of cases were Rhondda Cynon Taf with 650 cases followed by Caerphilly with 420 cases. Proportionally, Rhondda Cynon Taf continue to have the highest proportion of children receiving care and support with parental substance misuse indicated as a factor (41 per cent).¹⁰

7 Statistics for Children in Need are gathered by census of open cases on the 31st March of each year and reflect the number at that point.

8 The term 'Children Receiving Care and Support' is defined as children (under the age of 18) who have a care and support plan. Looked after children have a care and support plan and will be a subset of this population.

9 Note that statistics are classified as experimental and should be used with caution

10 As the statistics presented are classified as experimental, comparison between years is not presented here but can be found online at Stats Wales - <https://statswales.gov.wales/Catalogue/Health-and-Social-Care/Social-Services/Childrens-Services/children-receiving-care-and-support>



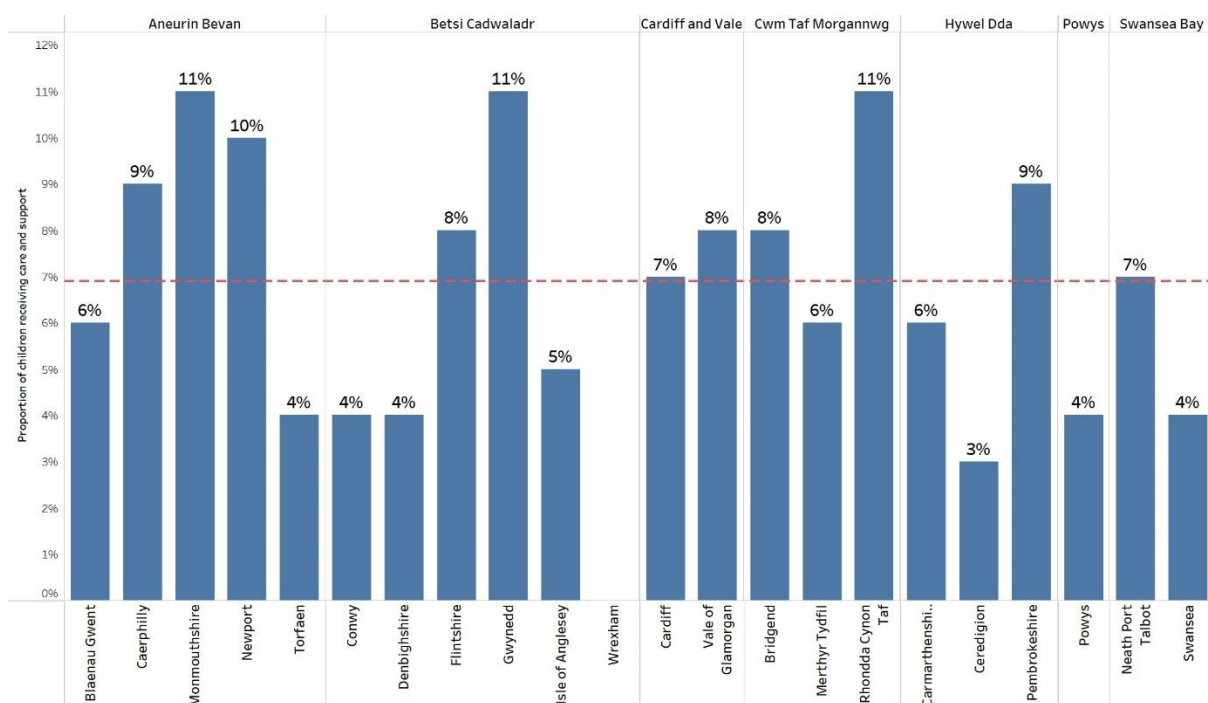
Source: Welsh Government, 2023

Chart 15: Children receiving care and support in Wales, percentage with parental substance misuse problems by local authority, as at 31st of March 2022.

As at 31st of March 2022, there were 630 children receiving care and support where their own substance misuse was identified as a problem, representing 3.7 per cent of all children receiving care and support, where data were available. The percentage of children receiving care and support with substance misuse problems by Local Authority is shown in Chart 16.

Cardiff reported the largest number of cases (n= 95), however, the highest proportion of children receiving care and support with substance misuse problems was reported in the Monmouthshire, Gwynedd and Rhondda Cynon Taf Local Authority areas at 11 per cent.

There was no clear relationship between the proportion of children receiving care and support with substance misuse problems and the percentage with parental substance misuse problems when compared between Local Authorities.



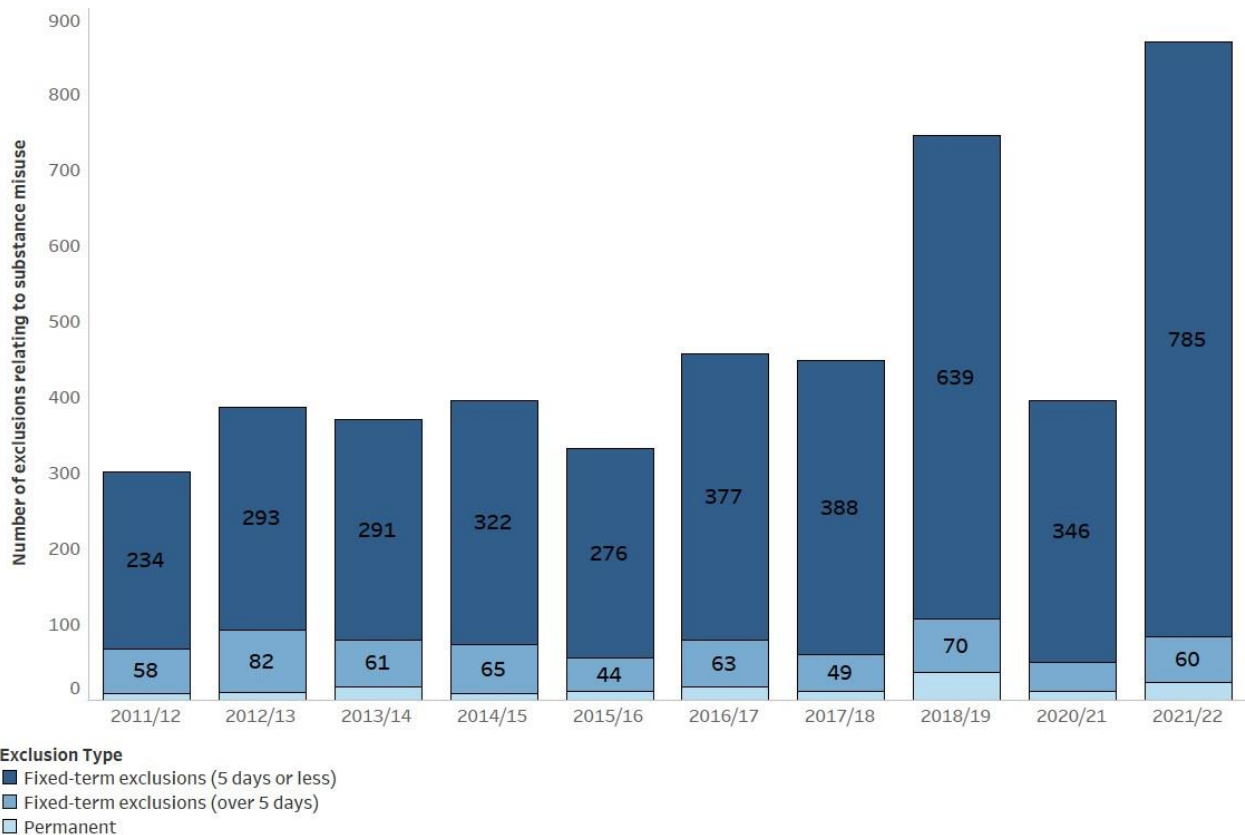
Source: Welsh Government, 2023

Chart 16: Children Receiving Care and Support in Wales, percentage with a substance misuse problem by Local Authority, as at 31st of March 2022.

10.2 School exclusions due to substance misuse

In 2021-22 (academic year), the number of school exclusions related to drugs or alcohol increased overall from 396 in 2020-21 to 869 (119 per cent) as shown in Chart 17, specifying type of exclusion; fixed term or permanent. This is the highest number of exclusions since 2011-12. There is no data for 2019-20 as schools were closed for much of the academic year due to the COVID-19 pandemic.

The number of permanent pupil exclusions due to drugs or alcohol increased to 24 cases and the number of fixed term exclusions over 5 days increased by 57.9 per cent. The number of exclusions of 5 days or less increased by 126 per cent in the last year. Of all school exclusions (any reason), drug and alcohol related exclusions accounted for 3.5 per cent in 2021-22.



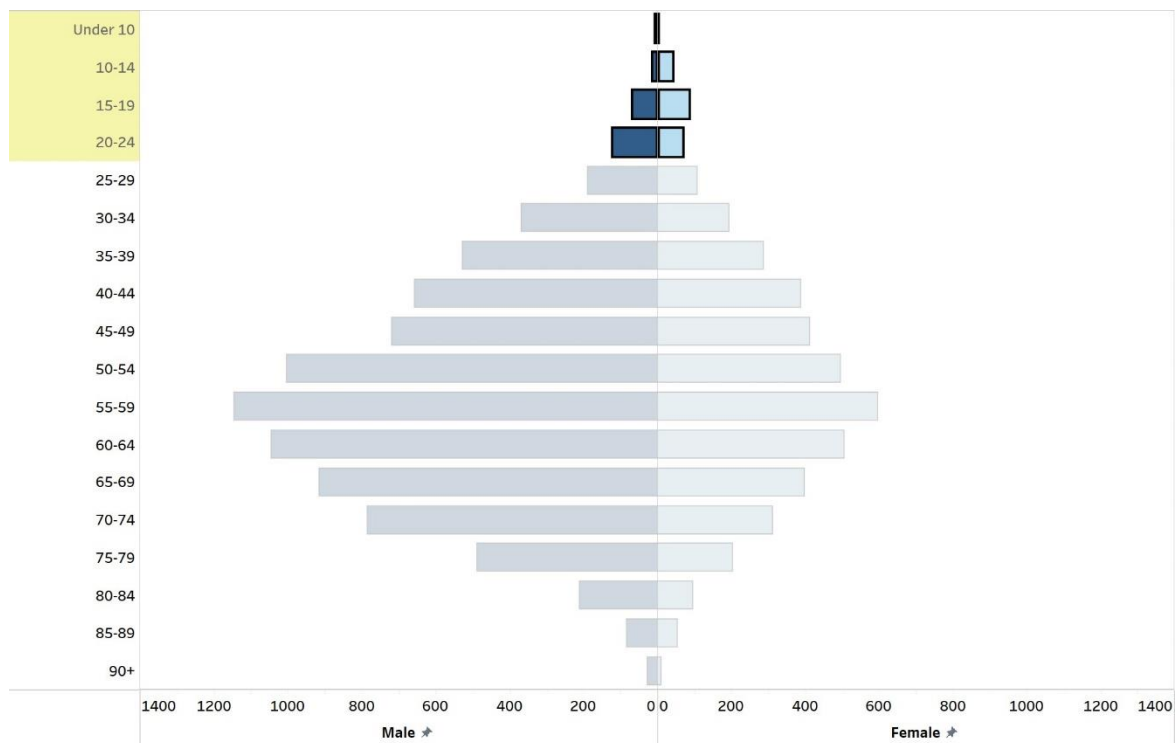
Source: Welsh Government, 2023

Chart 17: Number of school exclusions related to drugs and alcohol by type of exclusion, 2011-12 to 2021-22. (No data available for 2019-20 academic year as schools were closed during throughout COVID-19 pandemic lockdown).

10.3 Hospital admissions related to alcohol amongst children and young people

There were 401 admissions involving young people aged under-25 with an alcohol-specific condition in 2022-23, a decrease of 34.6 per cent compared with the previous year. The admissions involved 370 individuals of which 50 per cent were male.

There were 107 admissions with an alcohol-specific code in the primary position (42.1 per cent male) accounting for 26.7 per cent of all alcohol admissions for under-25s. Chart 18 shows the number of admissions for alcohol-specific conditions amongst under-25s resident in Wales in 2022-23 by sex and age group.

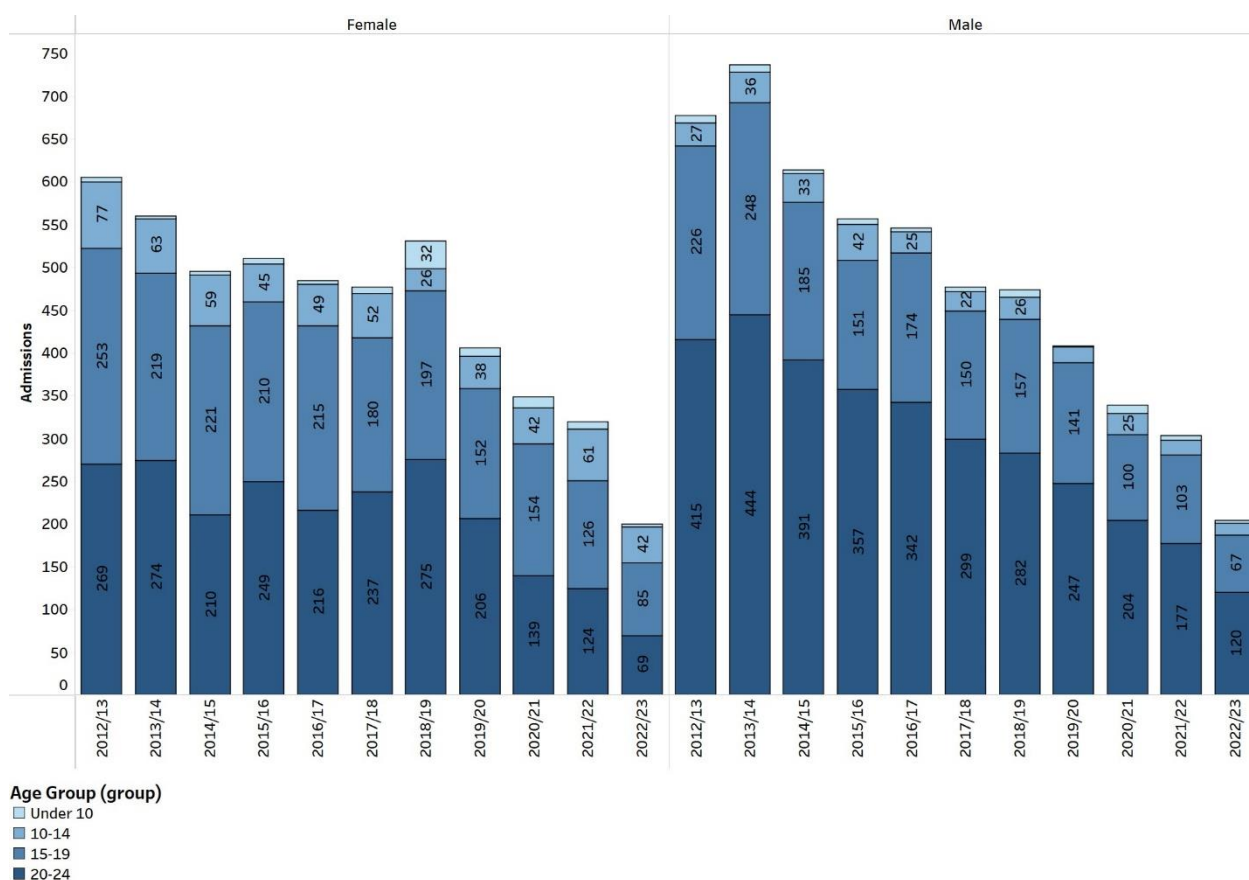


Source: Substance Misuse Programme / Digital Health and Care Wales, 2024

Chart 18: Hospital admissions for alcohol-specific conditions in Welsh residents aged under 25 years, by sex 2022-23

Chart 19 shows the number of admissions involving young people aged up to 25 with an alcohol-specific condition by year and gender. Admissions involving this age cohort have declined by 68.7 per cent over the last ten years, from 1,280, admissions in 2012-13. This decrease is comparable between males (70.0 per cent decrease) and females (67.2 per cent). Admissions involving both males and females decreased in 2022-23 compared to the previous year.

The under 25 age cohort accounted for 3.2 per cent of all admissions to hospital with an alcohol-specific condition in 2022-23.



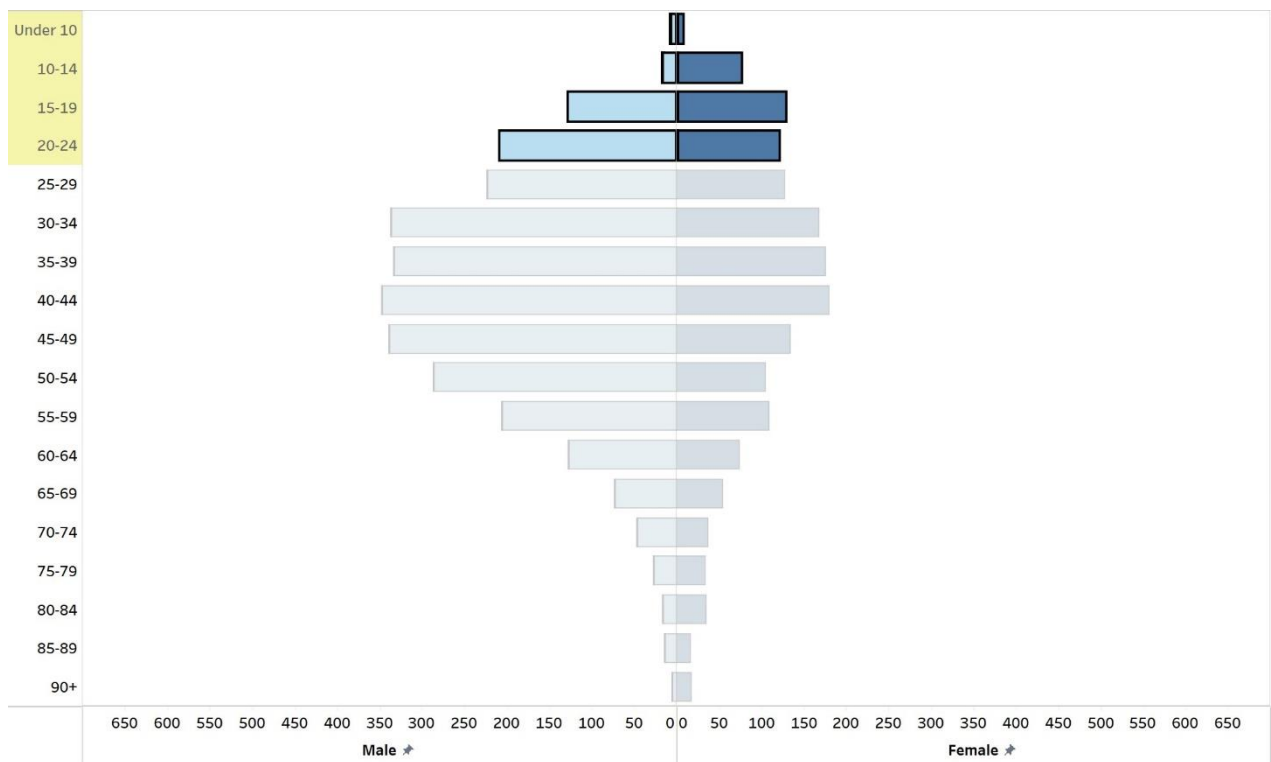
Source: Substance Misuse Programme / Digital Health and Care Wales, 2024

Chart 19: Admissions involving young people aged under 25 resident in Wales with an alcohol-specific condition, by year and sex 2012-13 to 2022-23

10.4 Hospital admissions for poisoning by illicit drugs in children and young people

In 2022-23, amongst young people aged up to 25, there were 692 admissions for conditions related to illicit drugs, a decrease of 11.1 per cent from the 2021-22 value. These admissions involved 590 individuals, a decrease of 11.8 per cent compared to the previous year.

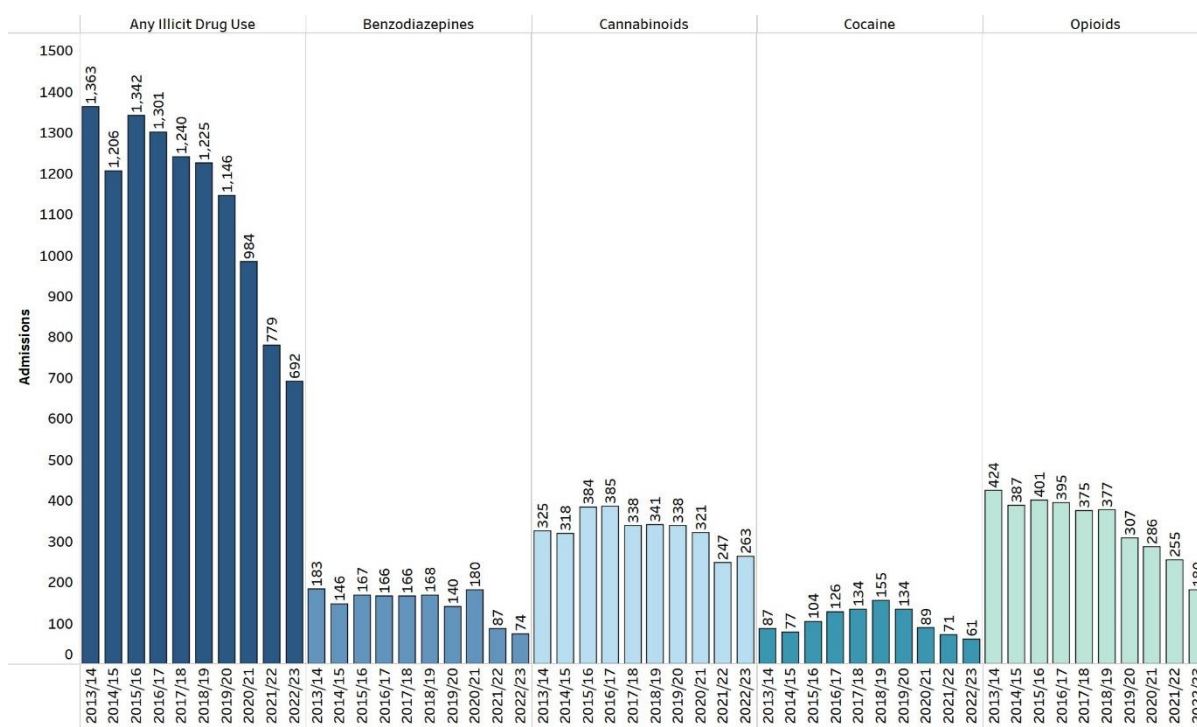
Young people aged up to 25 made up 20.1 per cent of all those admitted to hospital in 2022-23 for illicit drugs. Of these admissions, 51.6 per cent were male and 48.3 per cent were female. The proportion of male admissions in this age cohort has increased compared to the previous years. Chart 20 shows the number of young people aged under 25 resident in Wales and admitted to hospital following use of illicit drugs in 2022-23.



Source: Substance Misuse Programme / Digital Health and Care Wales, 2024

Chart 20: Hospital admissions for conditions related to illicit drugs amongst young people aged up to 24, Welsh resident by sex and age group, 2022-23

Chart 21 shows the number of illicit drug related admissions by substance over the past ten years for those aged under 25. Admissions for opioid use have been steadily decreasing since a peak in 2013-14. The number of admissions for cannabinoids increased to 263 in 2022-23 from 247 observed in 2021-22. Following a peak of 180 hospital admissions related to benzodiazepines in 2020-21, there has been a marked decrease in the two years since, to a new low of 74 admissions in 2022-23, representing a 58.8 per cent decline. Hospital admissions for cocaine, continue to decrease since 2018-19 from 155 to 61 admissions observed in 2022-23, which presents a decrease over the last five years of 60.6 per cent.



Source: Substance Misuse Programme / Digital Health and Care Wales, 2024

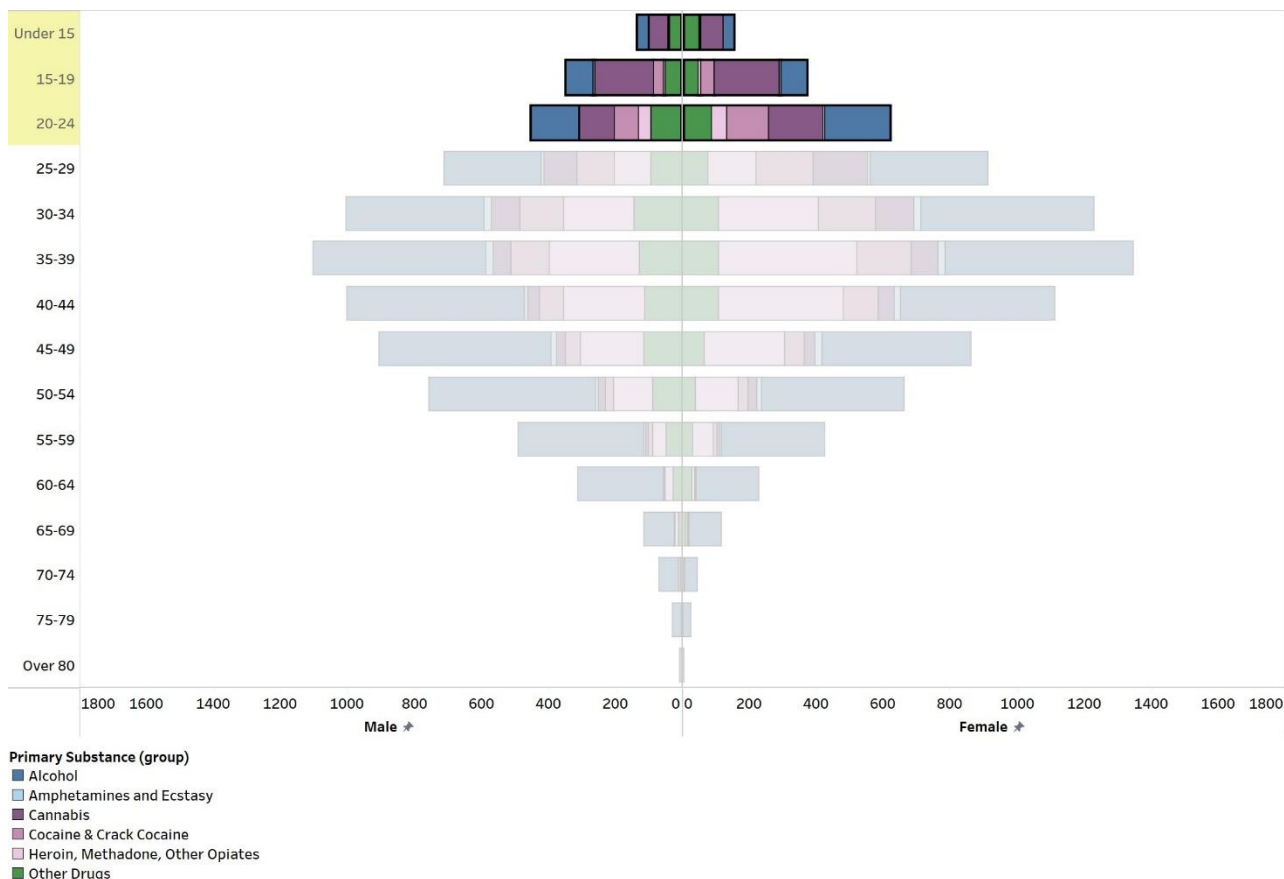
Chart 21: Hospital admissions for illicit drugs involving young people aged under 25 years and resident in Wales, by year and substance type, 2013-14 to 2022-23¹¹

10.5 Assessments in specialist substance misuse treatment services amongst children and young people

In 2022-23, there were 2,174 assessments of young people aged under 25, a 5.3 per cent decrease compared to the previous year (2,298 assessments). Over the last 5 years, the number of assessments has decreased by 19.3 per cent, with 2,696 assessments in 2018-19. The assessments were attended by 2,057 unique individuals, a 16.5 per cent decrease from 2018-19 (2,464 individuals assessed).

Chart 22 shows assessments for this age group by sex, age and primary substance reported as problematic. Young people accounted for 12.6 per cent of all assessments, consistent with the previous year.

¹¹ Individuals may have been admitted for more than once substance group and would have been included in each relevant group.



Source: Welsh National Database for Substance Misuse, 2023

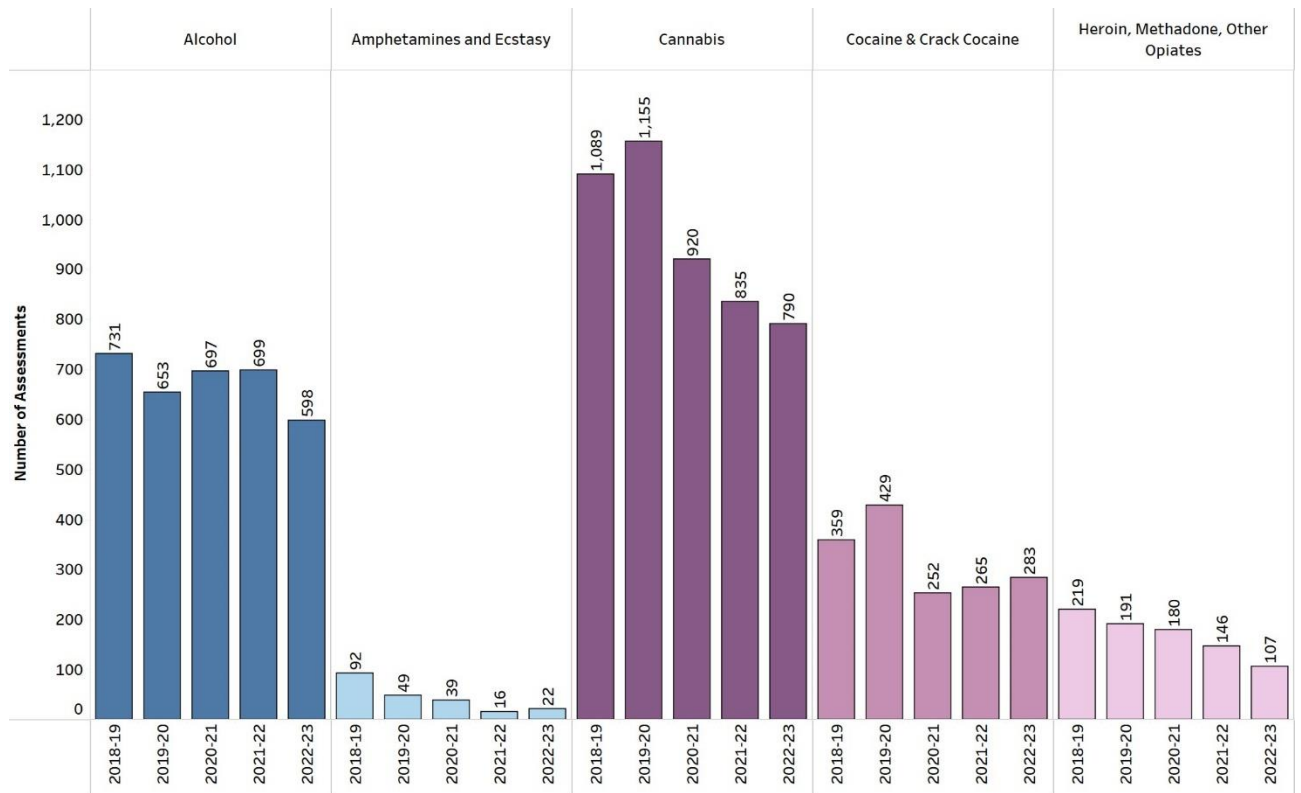
Chart 22: Young people aged under 25 assessed by substance misuse services in Wales, by sex, age band and primary substance reported as problematic, 2022-2023.¹²

Chart 23 shows the number of assessments by year and by primary substance reported at assessment in this age group. Despite a decrease of 27.4 per cent compared with 5 years ago, cannabis/cannabinoids remain the substance most frequently reported as problematic at assessments of young people.

Cocaine and crack cocaine assessment increased slightly to 283 (6.7 per cent) assessments in 2022-23.

The number of assessments involving opioids has decreased by 26.7 per cent compared to the previous year and by 51.1 per cent since 201-19. There has been a 14.4 per cent decrease in alcohol assessments and 37.5 per cent increase in amphetamine assessments, although amphetamine remains lower than 5 years ago.

¹² Where an individual was assessed more than once, details were taken from the first assessment



Source: Welsh National Database for Substance Misuse, 2023

Chart 23: Substance misuse assessments amongst young people under 25, by year and primary problematic substance reported 2018-19 to 2022-23, Wales

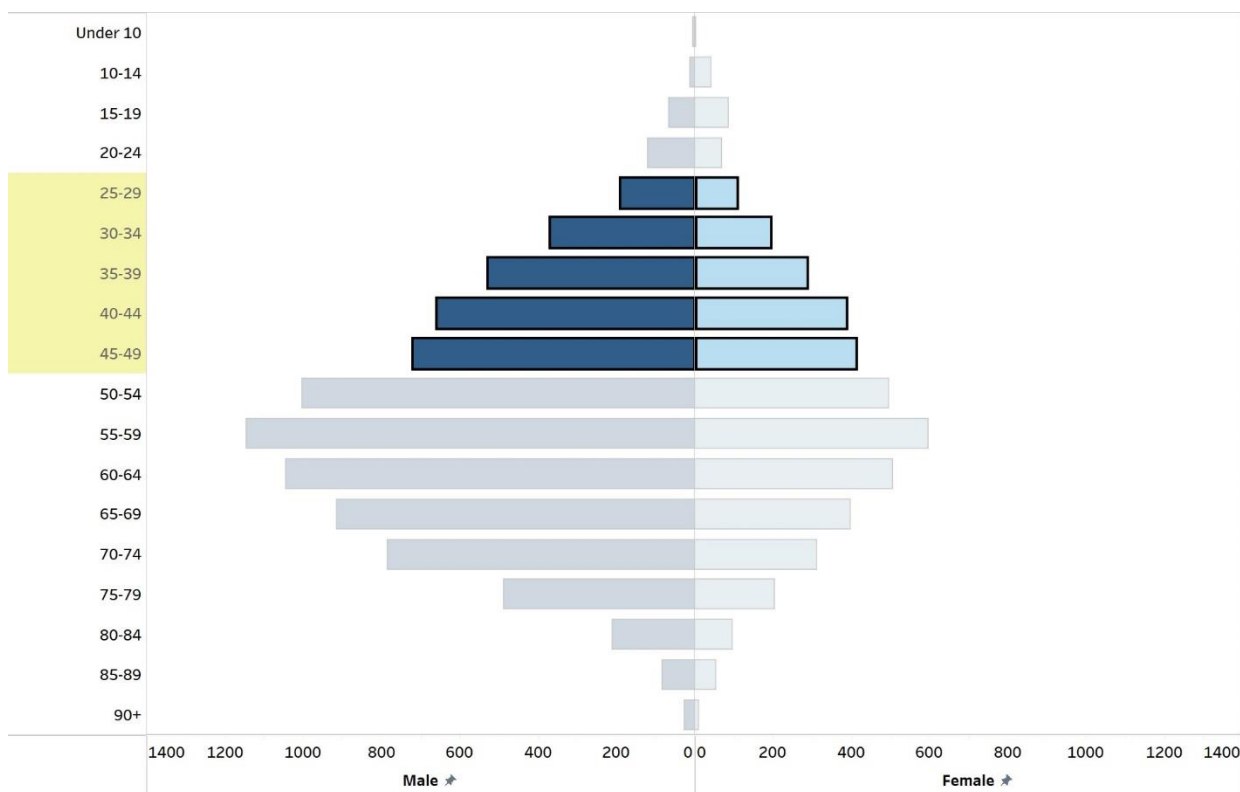
11. Adults aged 25 to 49 years

11.1 Hospital admissions for alcohol-specific conditions, adults 25-49 years

There were 3,849 hospital admissions for alcohol-specific conditions amongst adults aged 25-49 years in 2022-23, representing a decrease of 14.1 per cent on the previous year, as shown in Chart 25. Admissions in this age cohort have decreased by 39.7 per cent over the last decade. In 2022-23, 1,259 (32.7 per cent) of these admissions included an alcohol-specific code in the primary position.

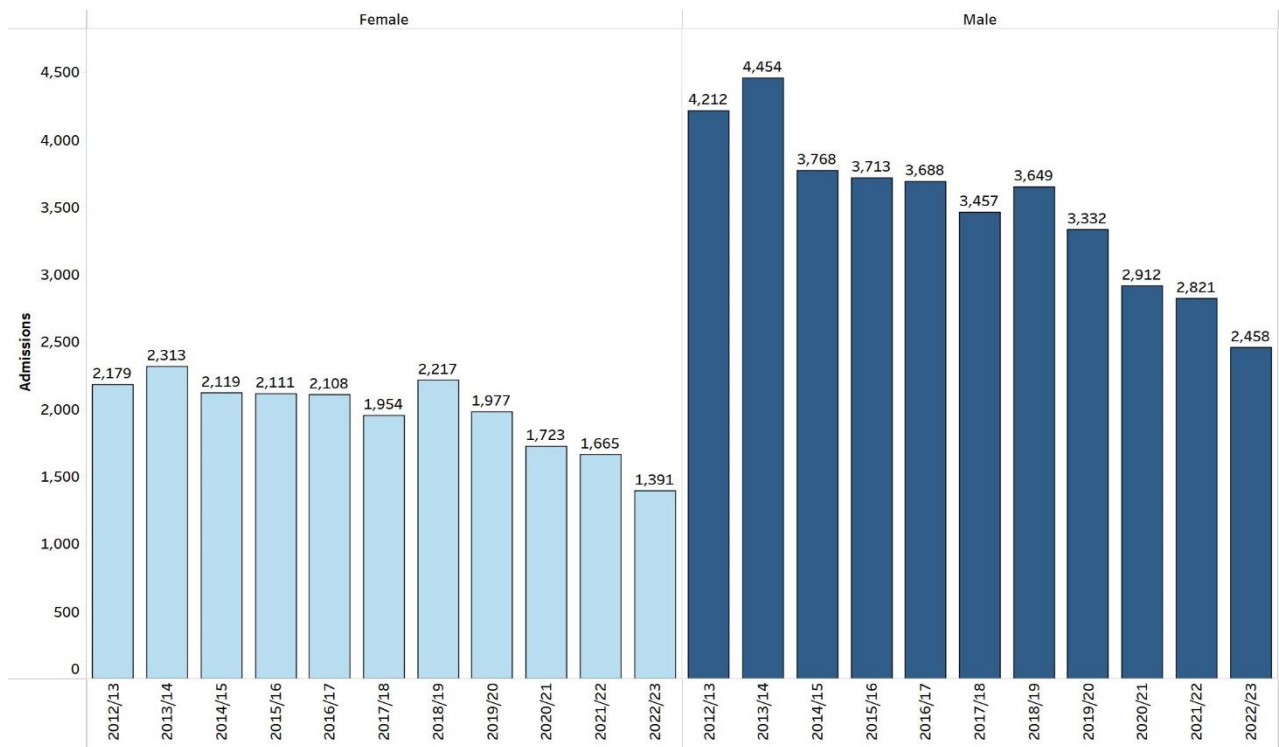
A total of 2,591 individual patients were admitted in 2022-23, of which 962 (37.1 per cent) had an admission which contained an alcohol-specific code in the primary position. The majority of patients, 65.4 per cent, were male, a proportion that has been remained relatively stable over the past six years. Adults aged 25-49 represented 30.6 per cent of all individuals admitted for alcohol-specific conditions in 2022-23. Chart 24 shows individuals aged 25-49 admitted to hospital in 2022-23 with an alcohol-specific condition by sex and age group.¹³

¹³ Where an individual was admitted more than once in the year, the diagnostic position of first admission was included



Source: Substance Misuse Programme / Digital Health and Care Wales, 2024

Chart 24: Adults aged 25-49 resident in Wales admitted to hospital with an alcohol-specific condition, by sex, age and diagnostic position of alcohol related condition, 2022-23.



Source: Substance Misuse Programme / Digital Health and Care Wales, 2024

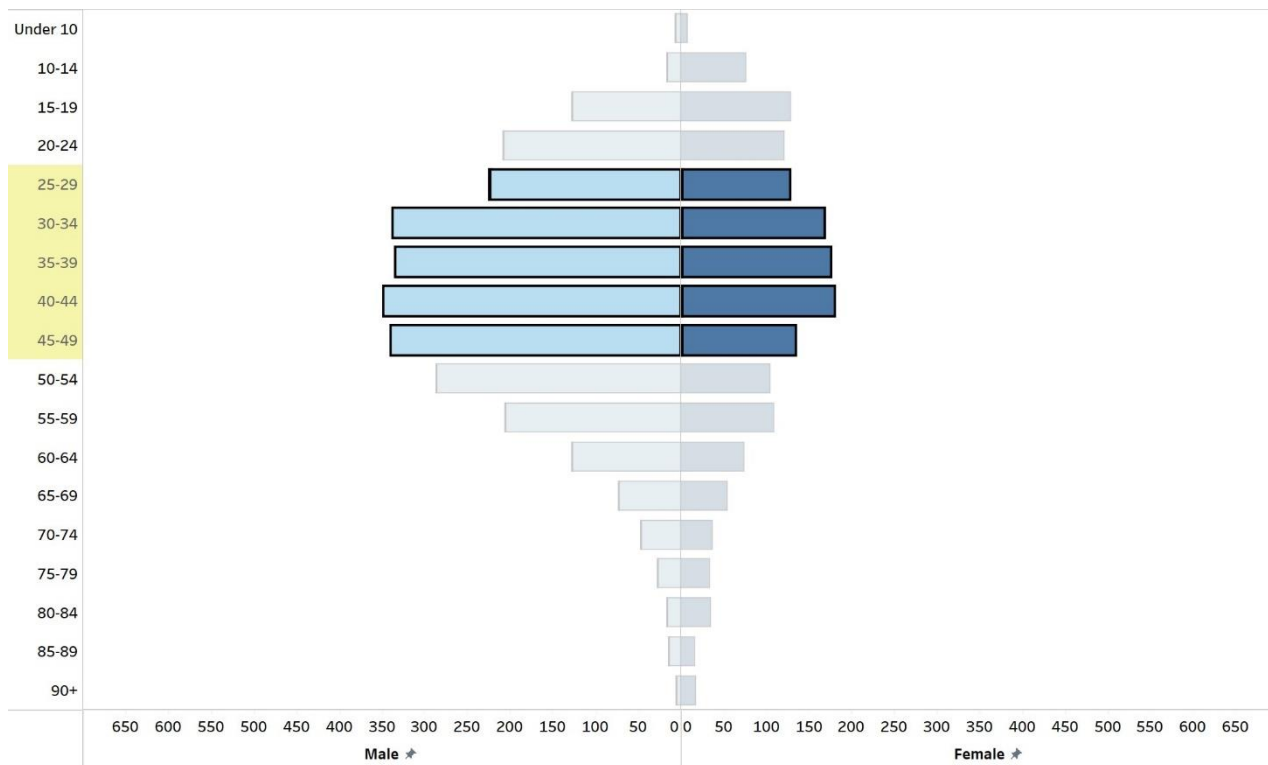
Chart 25: Hospital admissions for alcohol-specific conditions amongst adults aged 25-49 resident in Wales, by year and sex, 2012-13 to 2022-23

11.2 Hospital admissions for poisoning by illicit drugs in adults aged 25-49

There were 2,368 admissions related to the use of illicit drugs for this age cohort in 2022-23, involving 1,848 individuals. These numbers represent a decrease of 16.4 per cent in admissions and 16.8 per cent in individuals admitted when compared with 2021-22.

Individuals aged 25-49 made up 38.0 per cent of all those admitted for illicit drug related conditions in 2022-23, a decrease from the previous year. The sex split in this age cohort was substantially different to that found amongst younger people, with males accounting for 66.1 per cent of those admitted in 2022-23.

Compared to previous years, the distribution of person-based admissions was more consistent between age bands within this cohort in 2022-23. Chart 26 shows the number of individuals resident in Wales and admitted to hospital following use of illicit drugs in 2022-23.

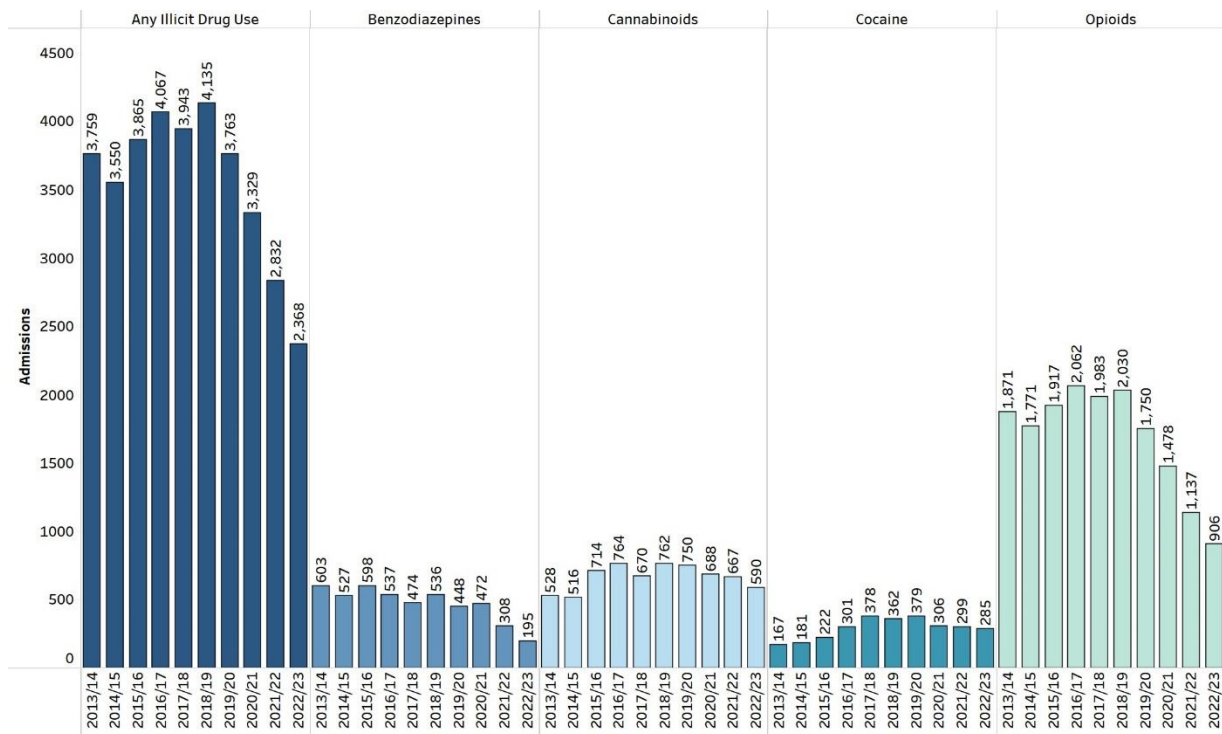


Source: Substance Misuse Programme / Digital Health and Care Wales, 2024

Chart 26: Adults aged 25-49 resident in Wales admitted to hospital with a condition related to illicit drugs, by sex and age group, 2022-23

Chart 27 shows the number of illicit drug related admissions by substance type over the past ten years for those aged 25-49 years. The most common substance group are opioids, involved in 38.3 per cent of admissions. Admissions involving opioids in 2022-23 decreased by 20.3 per cent compared to the previous year and are the lowest recorded in the last 10 years.

Although there has been a slight decrease in the number of admissions involving cocaine in 2022-23, admissions remain relatively stable over the past three years and have increased by 28.4 per cent since 2015/16.



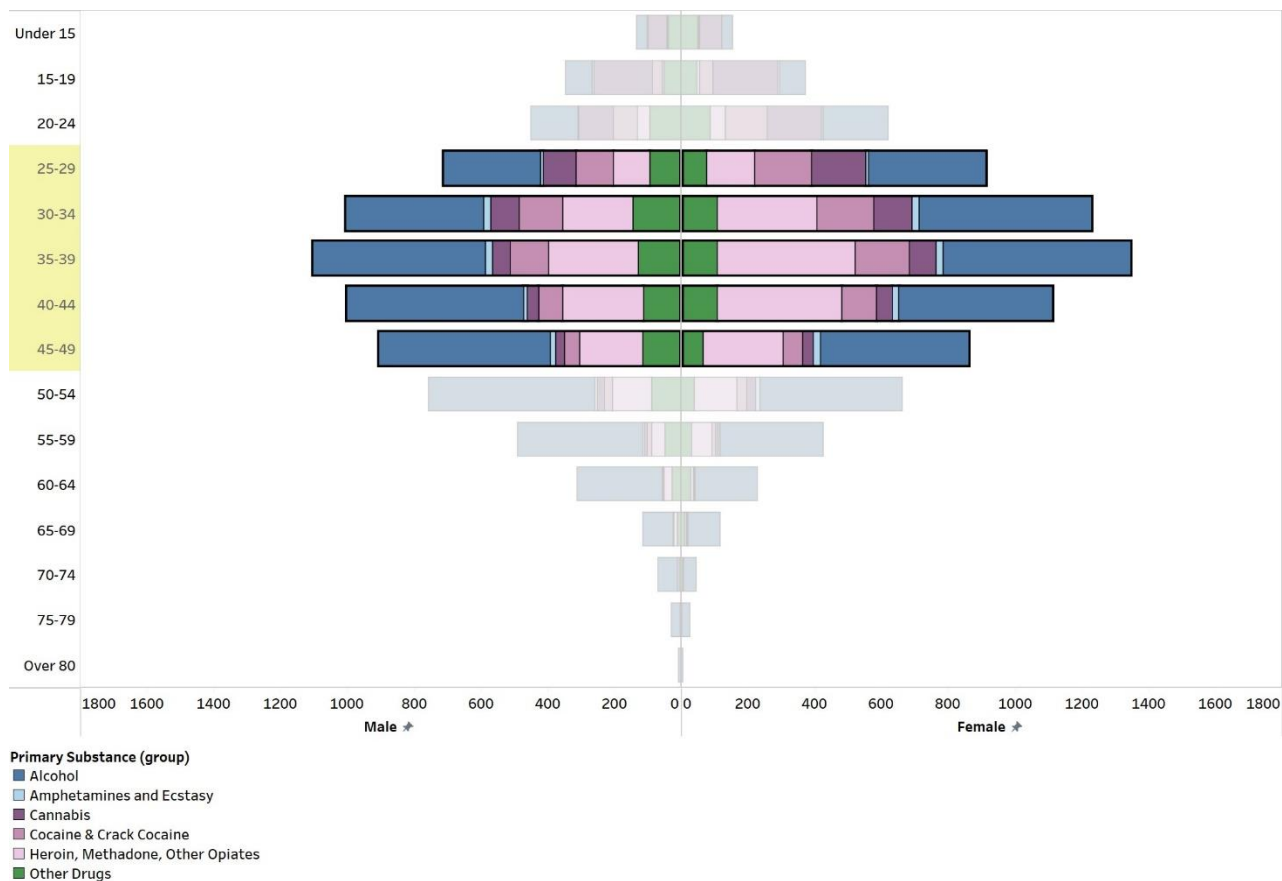
Source: Substance Misuse Programme / Digital Health and Care Wales, 2024

Chart 27: Hospital admissions for named illicit drugs amongst adults aged 25-49, resident in Wales by year and substance type, 2022-23¹⁴

11.3 Assessment by substance misuse treatment services, adults aged 25-49 years

There were 11,397 assessments within specialist substance misuse services amongst individuals aged 25-49 in 2022-23, a decrease of 2.4 per cent from 2021-22. The assessments involved 10,176 unique individuals, representing 65.5 per cent of all individuals assessed in 2022-23. Of these, 53.6 per cent were female, an increase since the previous year. The 35-39 age band contained the most individuals assessed across all age bands, with 2,446 individuals (15.7 per cent). Chart 28 shows individuals assessed by substance misuse services in Wales in 2022-23 by age, sex and primary problematic substance type.

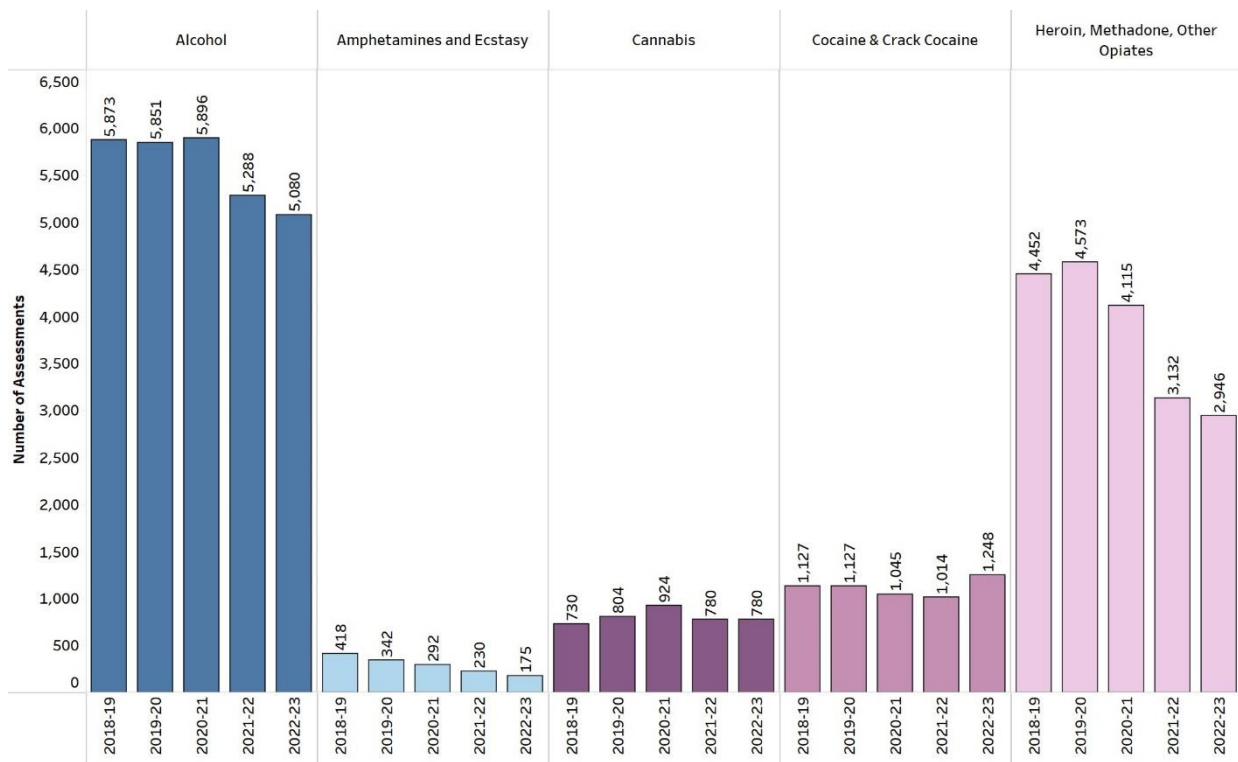
¹⁴ Individuals may have been admitted for more than once substance group and would have been included in each relevant group.



Source: Welsh National Database for Substance Misuse, 2023

Chart 28: Adults aged 25-49 assessed by substance misuse services in Wales, by sex, age band and primary substance reported as problematic, 2022-23.¹⁵

¹⁵ Where an individual was assessed more than once, details were taken from the first assessment.



Source: Welsh National Database for Substance Misuse, 2023

Chart 29: Substance misuse assessments amongst adults aged 25-49, by year and primary problematic substance reported, Wales 2018-19 to 2022-23.

Alcohol was the most frequently reported problematic substance reported at assessment with 5,080 assessments, a reduction of 3.9 per cent compared with the previous year. An increase of 23 per cent was recorded in assessments in which crack/powder cocaine was reported as the primary problematic substance.

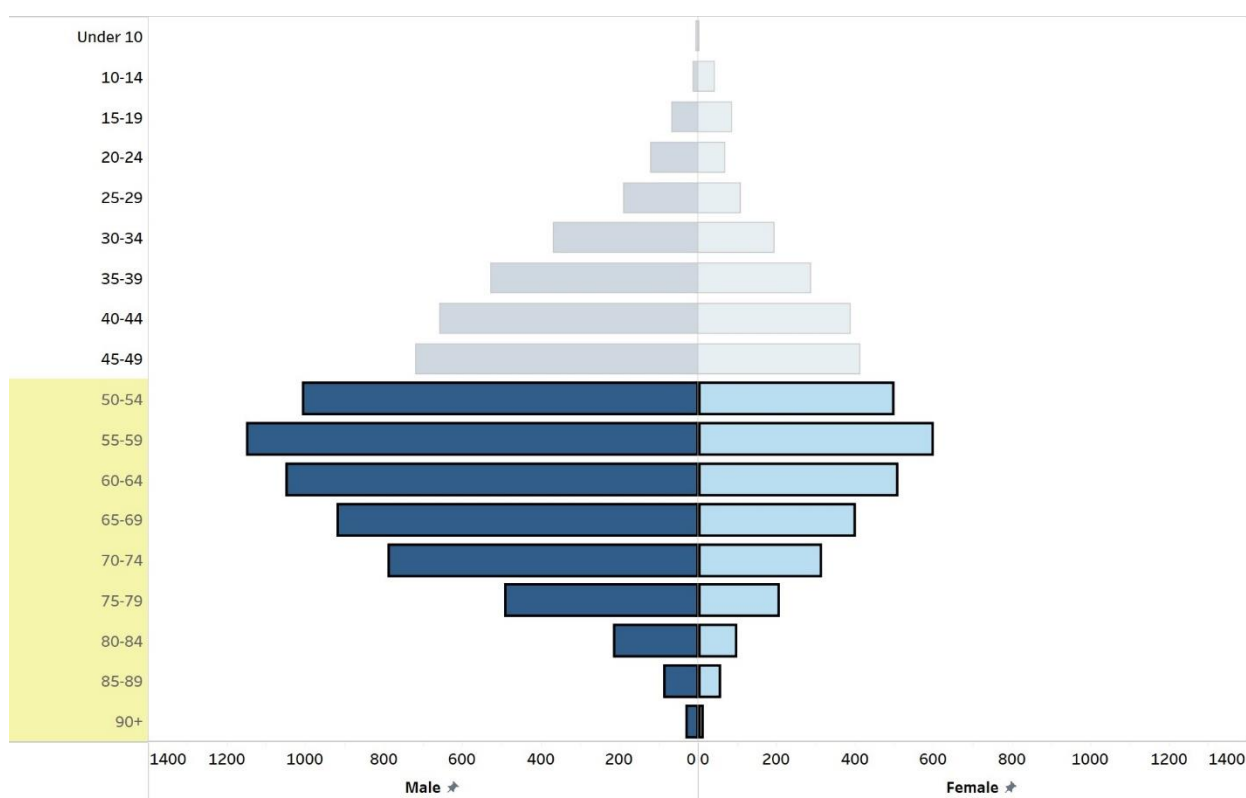
The number of assessments in which opiates were recorded as the primary problematic substance have decreased by 5.9 percent, 2946 assessments compared with 3,132 in the previous year. There have been small but repeated decreases in the number of assessments involving amphetamines each year since 2018-19, with an observed 58.1 per cent decrease in that period. The number of assessments involving cannabis remain stable, with 780 assessments recorded in 2021-22 as well as 2022-23.

12. Older adults aged 50 years and above

12.1 Hospital admissions for alcohol-specific conditions, older adults

There were 8,376 hospital admissions for alcohol-specific conditions in 2022-23 amongst adults aged 50 or older. Of these admissions, 1,654 (19.7 per cent) were for alcohol-specific conditions in the primary position. There were 5,501 individual patients admitted, of which 1,348 (24.5 per cent) were for conditions in the primary position. Males accounted for 67.2 per cent of admissions, comparable to previous years. The 50+ age cohort made up 65.0 per cent of all those admitted for alcohol-specific conditions in 2022-23, an increase from the previous year.

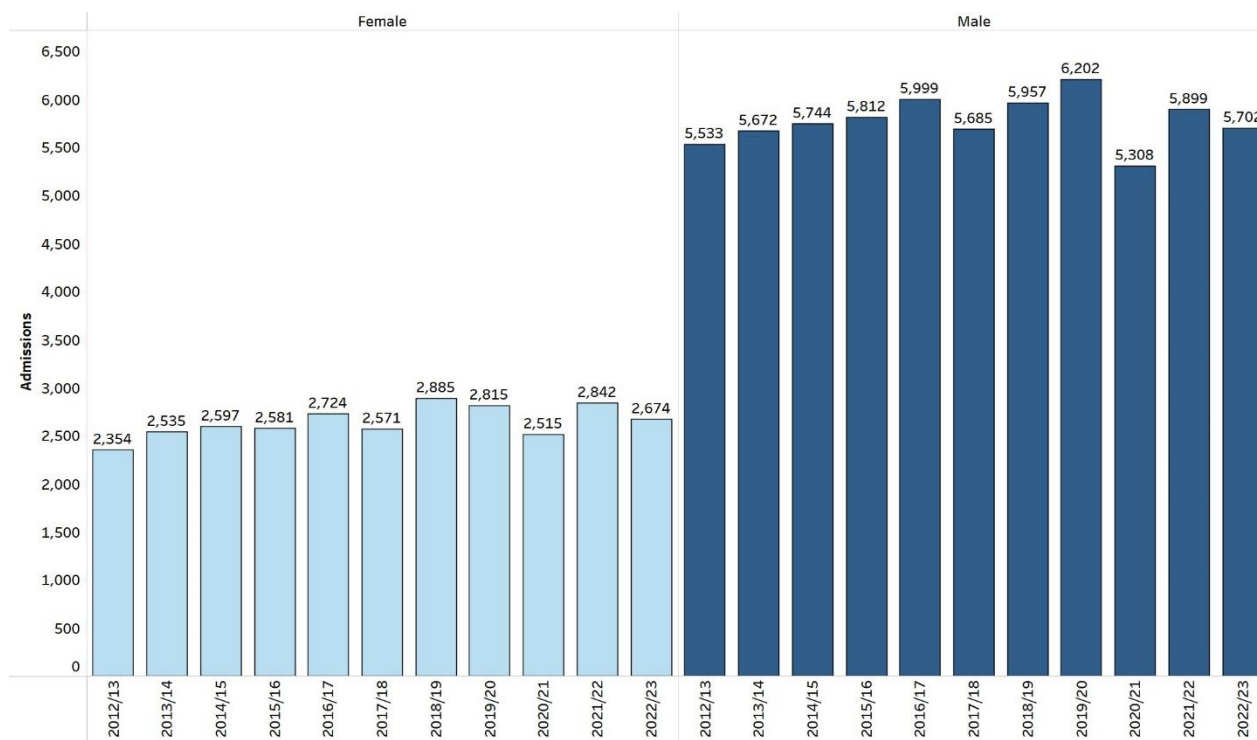
The five-year age band with the greatest number of individuals admitted falls within this cohort, with those aged 55-59 making up 12.9 per cent, or approximately one in eight of all alcohol-specific hospital admissions in 2022-23. Chart 30 shows the number of individuals aged 50+ admitted with an alcohol-specific condition in any diagnostic position in 2022-23 by sex and age group.



Source: Substance Misuse Programme / Digital Health and Care Wales, 2024

Chart 30: Older adults aged 50+ resident in Wales admitted to hospital with an alcohol-specific condition, by age band and sex and age 2022-23

Chart 31 shows the number of admissions involving those aged 50 years or more involving an alcohol-specific condition by sex. Since 2012-13, there has been a 6.2 per cent increase in the number of admissions involving individuals over the age of 50.



Source: Substance Misuse Programme / Digital Health and Care Wales, 2024

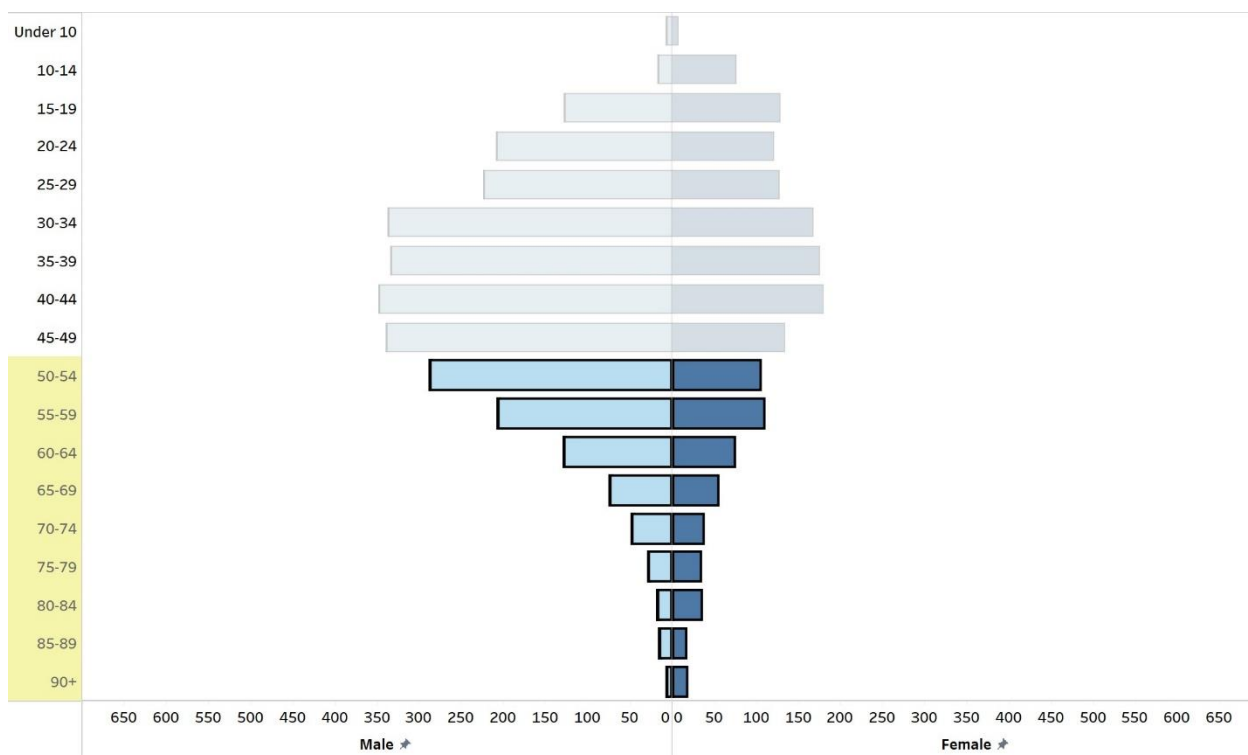
Chart 31: Hospital admissions for alcohol-specific conditions amongst older adults aged 50+ resident in Wales by year and sex, 2012-13 to 2022-23

12.2 Hospital admissions for poisoning with illicit drugs in older adults

In 2022-23, there were 1,282 illicit drugs related admissions involving 1,007 individuals aged 50 years or older, comparable with 2021-22 (1,248 admissions and 987 individuals). Of these 60.6 per cent of patients were male. Males have had a higher proportion of admissions in this age category since 2014-15, though the difference between sexes has decreased in the last year.

Individuals aged 50 and over made up 29.2 per cent of all those admitted in 2022-23 following illicit drug use compared to 19.6 per cent 7 years ago.

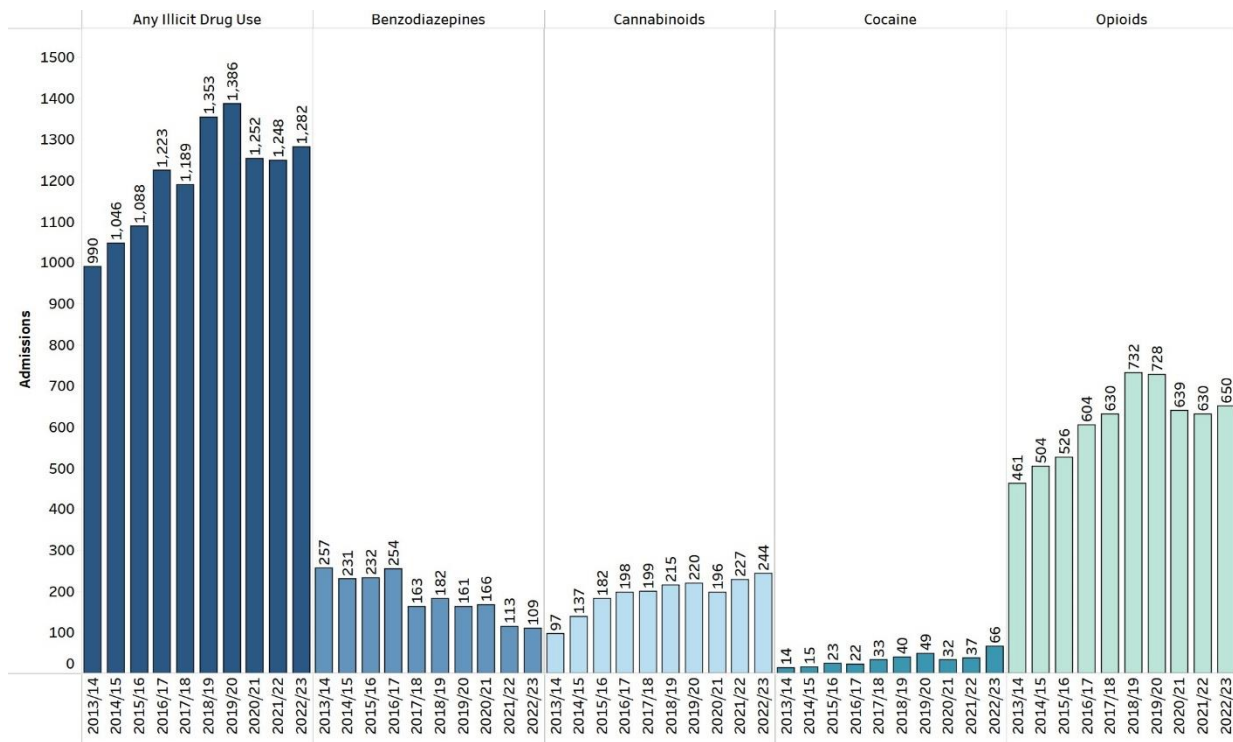
Within this broad age cohort, the 50-59 age category reported the largest number of individuals, representing 15.7 per cent of all individuals admitted for illicit drugs across all age categories. Chart 32 shows the number of older individuals resident in Wales and admitted to hospital following use of illicit drugs in 2022-23.



Source: Substance Misuse Programme / Digital Health and Care Wales, 2024

Chart 32: Older adults aged 50+ resident in Wales admitted to hospital with a condition related to illicit drugs, by sex and age, 2022-23

There were considerably fewer admissions involving other illicit drugs within this age category. The number of admissions following use of cocaine/crack has increased by 78.4 per cent from 2021-22.

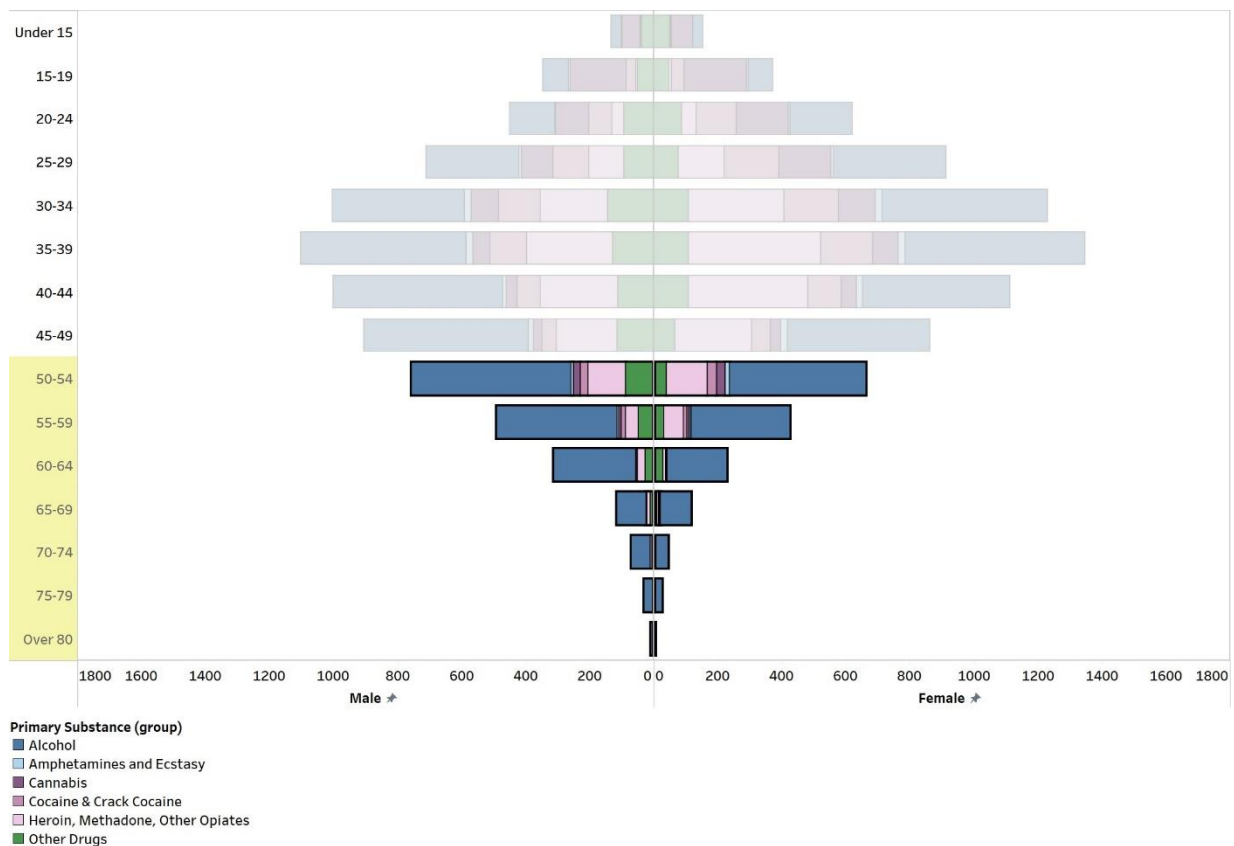


Source: Substance Misuse Programme / Digital Health and Care Wales, 2024

Chart 33: Hospital admission for conditions related to illicit drugs amongst older adults aged 50+ resident in Wales by year and substance type, 2022-23

12.3 Assessment by substance misuse treatment services, older adults

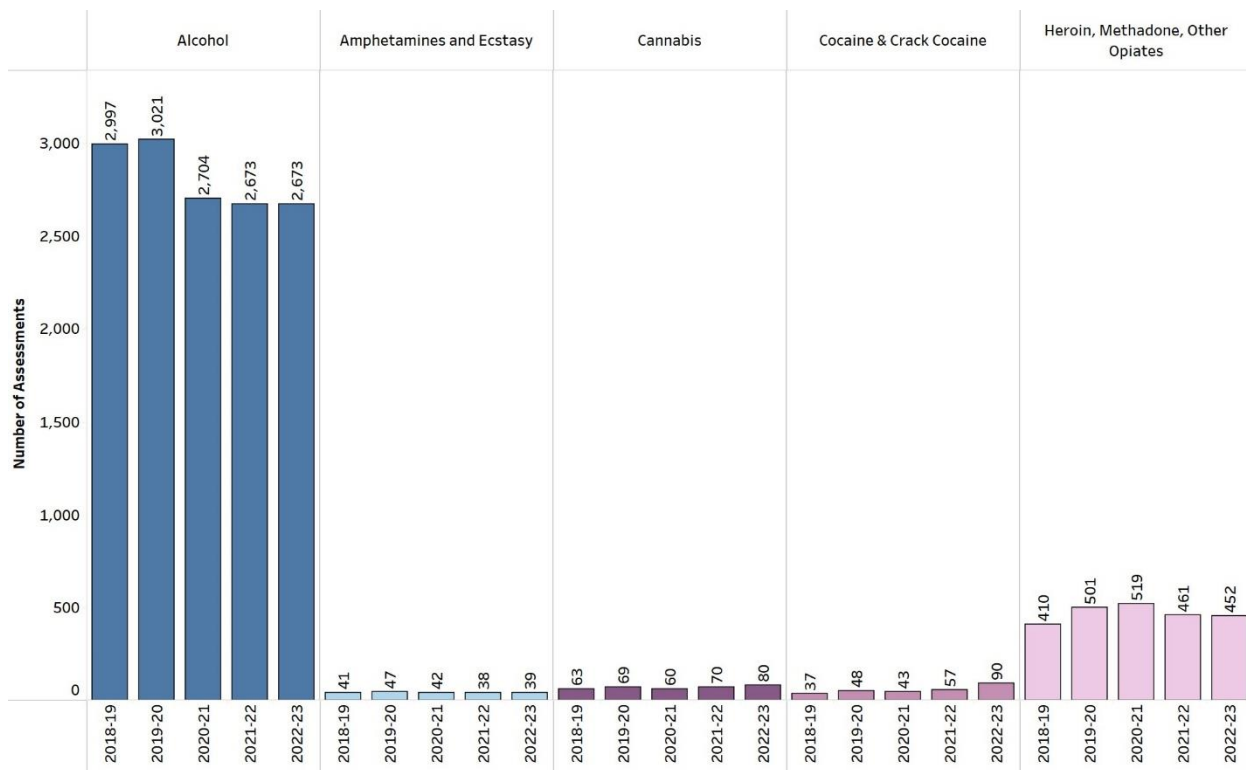
There were 3,658 assessments for individuals aged 50 and over recorded on the Welsh National Database for Substance Misuse in 2022-23, remaining stable from 2021-22. These assessments involved 3,288 unique individuals, of which 45.9 per cent (n=1,511) were female. A substantial majority of those assessed within this age cohort were within the 50-59 age group (n=2,331). Chart 34 shows individuals aged 50 and over assessed by specialist substance misuse services in Wales by age, sex and primary problematic substance reported.



Source: Welsh National Database for Substance Misuse, 2023

Chart 34: Older adults (aged 50+) assessed by substance misuse services in Wales, by sex, age band and primary problematic substance reported, 2022-23.

As shown in Chart 35, alcohol was the most frequently presenting problematic substance, representing 80.1 per cent of assessments (n=2,673). This compares with 13.5 per cent (n=452) of assessments where opioids were reported as the main problematic substance, which is a 1.9 per cent decrease from last year. However, assessments amongst older adults aged 50+, for cannabis and cocaine have both increased from 2021-22, by 14.2 per cent and 57.8 per cent respectively.

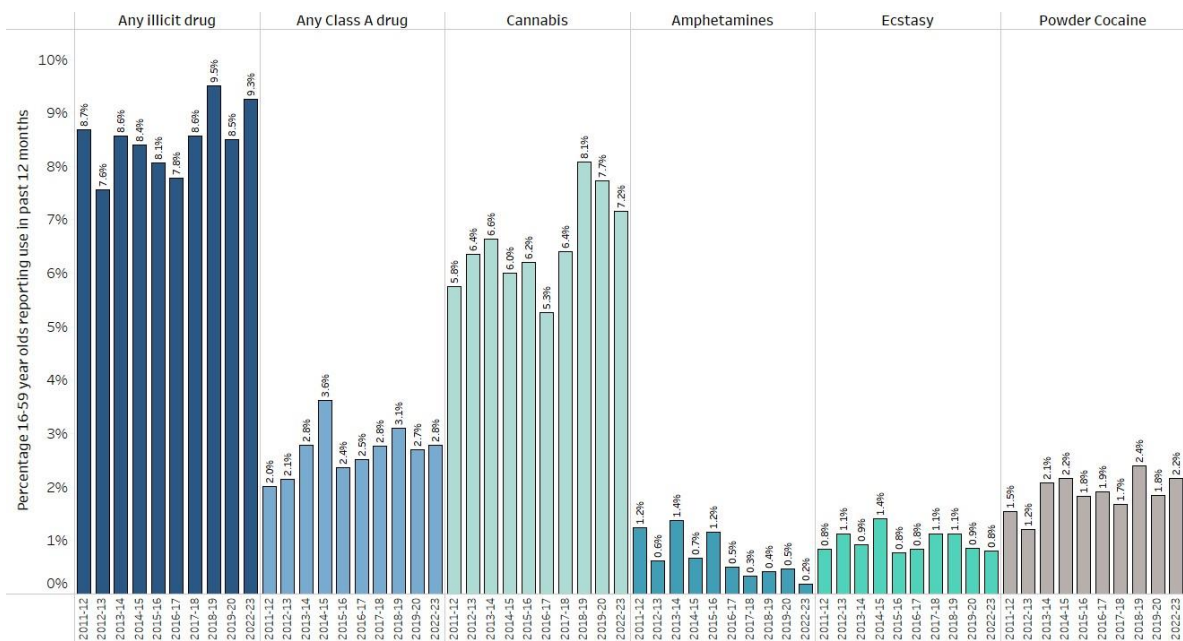


Source: Welsh National Database for Substance Misuse, 2023

Chart 35: Substance misuse assessments amongst older adults aged 50+, by primary problematic substance reported, Wales 2018-19 to 2022-23.

13. Self-reported use of illicit drugs in the past year: adults aged 16-59 years

The Crime Survey for England and Wales (CSEW) is typically carried out annually, however no data was published for 2020-21 or 2021-22.¹⁶ Whilst its principal purpose is to survey a representative sample of the population on their experiences of crime, it also includes questions relating to individuals' own use of, and attitudes towards, illicit drugs. The CSEW advised that whilst ***"It is recognised as a good measure of recreational drug use.....it does not provide good coverage of the problematic drug use population, as many such users may not be a part of the household resident population which is covered by the survey."***¹⁷



Source: Home office, 2023

Chart 36: Percentage of adults in Wales aged 16-59 self-reporting use of selected illicit drugs in past 12 months, 2010-11 to 2022-23.

Data from the CSEW for 2022-23 suggests that use of illicit drugs has increased from 8.5 per cent in 2019-20 to 9.3 per cent. The proportion of adults self-reporting the use of illicit substances in Wales is comparable with England overall (9.5 per cent), particularly the North West (8.9 per cent).

Compared to 2015-16, the self-reported use of:

¹⁶ Office for National Statistics: Drug misuse finding from the 2022 to 2023 CSEW. Available at <https://www.ons.gov.uk/peoplepopulationandcommunity/crimeandjustice/bulletins/crimeinenglandandwales/yearendingmarch2023>

¹⁷ Home office 2018 : Drug misuse: Findings from the 2018/19 Crime Survey for England and Wales. Available at https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/832533/drug-misuse-2019-hosb2119.pdf

- Any Class A drug has increased from 2.4 per cent to 2.8 per cent.
- Powder Cocaine has increased from 1.8 per cent to 2.2 per cent.
- Cannabis has increased from 6.2 percent to 7.2 per cent.

In Wales, the proportion of adults who self-reported use of non-prescribed prescription-only painkillers for medical reasons has reduced from 10.7 per cent in 2015-16 to 5.0 per cent in 2022-23, comparable to England overall in 2022-23 (4.9 per cent).

14 Injecting drug use: risk behaviours and blood borne viruses

14.1 People who inject drugs and access Needle and Syringe Programmes

In 2010, Public Health Wales, supported by Welsh Government, introduced the Harm Reduction Database (HRD) in all statutory and voluntary sector specialist Needle and Syringe Programmes (NSPs) across Wales. Since April 2014, community pharmacy provision of injecting equipment has also been included. Details of how data is collected through the HRD and the most recent HRD activity reports are available online.¹⁸

An individual was considered a 'regular' user of NSPs in Wales if they had:

- Accessed NSP services at least two or more times in the current year.
- Accessed NSP services for injecting image and performance enhancing drugs (IPEDs) *and* accessed services at least once in the current and previous year.

This distinction is made to limit the impact on the data of individuals who may use different identifier details when presenting for injecting equipment or who are people who inject drugs infrequently.

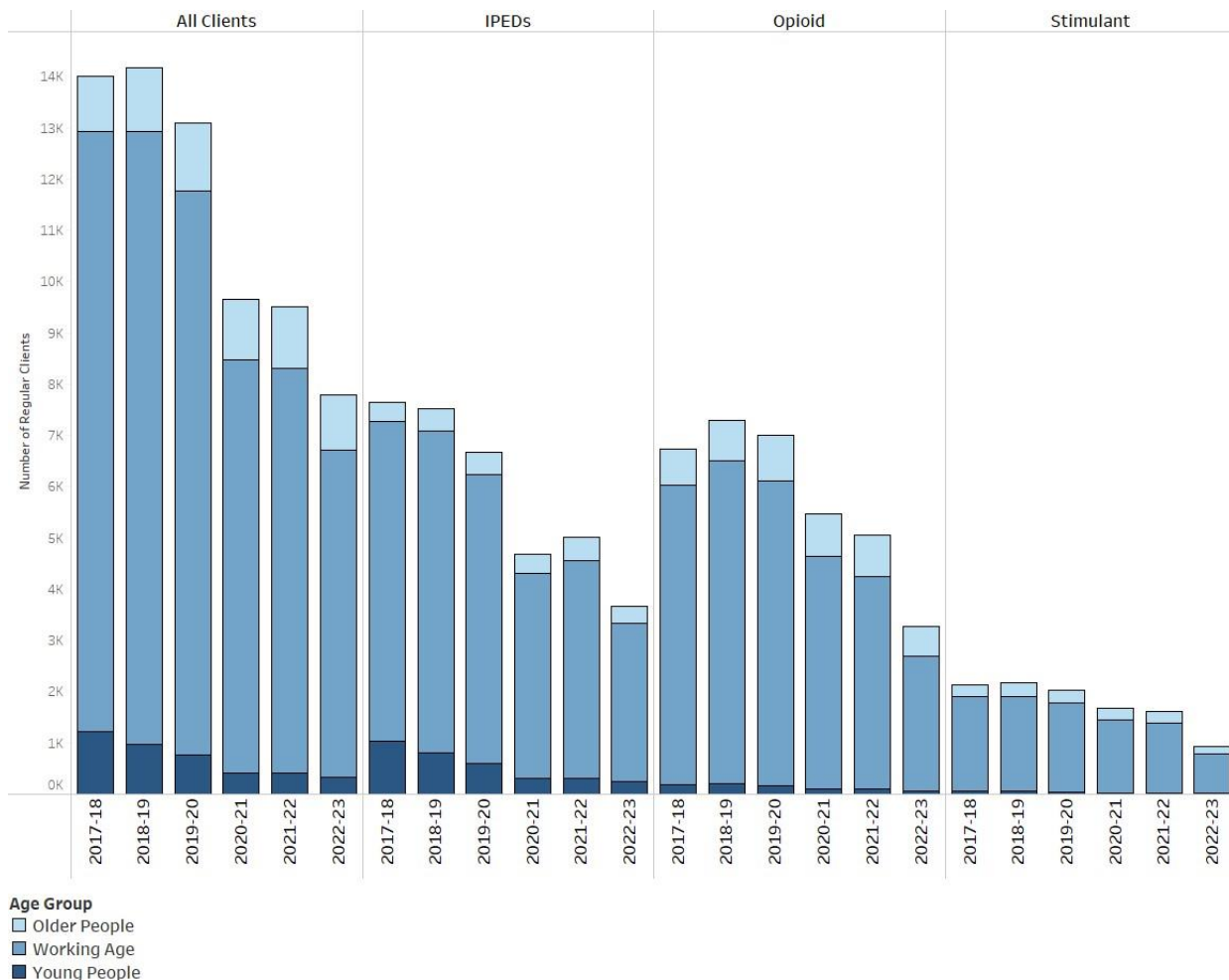
Data is reported by substance group: opioids, stimulants and IPEDs.^{19,20} As injecting and problematic drug use often involves use of more than one substance, individuals may be included in multiple substance groups.

In 2022-23, a total of 15,331 individuals accessed NSP services at least once in Wales. Of these, 7,788 were defined as people who inject drugs (PWID) and regularly access NSP services. The remaining 7,543 individuals (49.2 per cent) attended an NSP service only once in 2022-23. Chart 37 shows the number of regular individuals accessing NSP services between 2017-18 and 2022-23, by age and substance group.

¹⁸ Public Health Wales: Harm reduction database – Needle and syringe programme activity in Wales 2021-22. Available at <https://phw.nhs.wales/publications/publications1/needle-and-syringe-programme-activity-in-wales-annual-report-2021-22/>

¹⁹ Stimulants include amphetamine, crack and cocaine, mephedrone and other cathinone substances.

²⁰ Includes injectable and oral Anabolic and Androgenic Steroids, Peptides (including Growth Hormone), Melanotan, Insulin and Insulin Growth Factors



Source: Harm Reduction Database Wales 2023

Chart 37: People who inject drugs and regularly accessing Needle and Syringe Programmes in Wales, by age group, year and substance group, 2017-18 to 2022-23 ²¹

14.1.1 Young people aged up to 25

In 2022-23, young people represented 4.3 per cent (n=335) of all individuals regularly attending NSP services. This proportion remains unchanged over the past three years, decreasing from 5.9 per cent in 2019-20. A similar trend was observed among IPED and opioid substance groups, stimulant use among regular NSP attendees who are aged under 25 has increased since 2019-20 and is comparable to 2018-19.

Of all regular NSP service attendees aged under 25:

- 92.2 per cent (n=309) of these were male
- 74.0 per cent (n=248) reported IPED use

²¹ A regular user is defined as an individual who accessed a needle and syringe programme on at least two or more occasions in a given calendar year or reported IPED use in and accessed NSP in both the current and previous year.

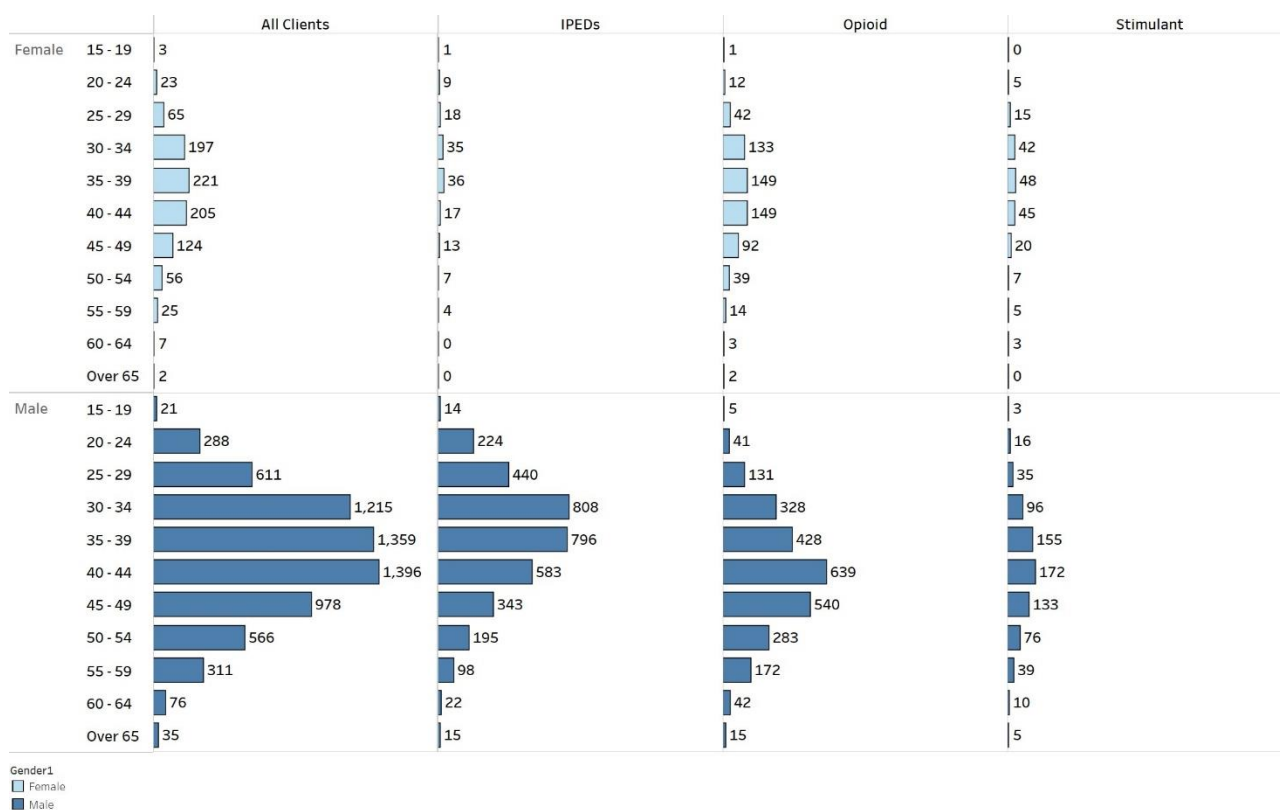
- 17.6 per cent (n=59) reported opioid use
- 7.2 per cent (n=24) reported stimulant use

14.1.2 Adults aged 25-49 years

People who inject drugs aged 25-49 years make up the majority of those regularly accessing NSPs in Wales, with a total of 6,374 individuals (81.8 per cent) in 2022-23, similar to the previous year (83.1 per cent). Of this total ²²:

- 87.2 per cent (n=5,559) were male
- 48.4 per cent (n= 3,089) reported IPED use
- 41.3 per cent (n=2,634) reported opioid use
- 11.9 per cent (n= 762) reported stimulant use

The proportion of male to female PWID varied by primary drug type as shown in Chart 38.



Source: Harm Reduction Database Wales 2023

Chart 38: Number of people who inject drugs, regularly accessing NSP services by sex, age group and substance group, Wales, 2022-23.

²² Individuals reporting poly-drug use may be included in more than one substance group.

14.1.3 Older adults 50+

There were 1,079 individuals aged 50 years or more regularly attending NSP services in 2022-23, representing 13.6 per cent of the total. This continues to increase from 5.5 per cent in 2015-16.

Of the 1,079 older adults accessing NSPs:

- 91.6 per cent (n=988) were male
- 31.6 per cent (n=341) reporting IPED use
- 52.9 per cent (n=571) reported opioid use
- 13.4 per cent (n=145) reported stimulant use

14.2 Risk behaviours amongst people who inject drugs

Injecting drug use, in particular when involving sharing of injecting equipment, both direct (the sharing of needles and syringes) and indirect (the sharing of other injecting-related equipment including spoons/cookers, filters, water), has a clear impact on the prevalence of blood borne viral infections, including hepatitis B, hepatitis C, HIV and bacterial infections. Evidence on direct and indirect sharing and blood borne virus (BBV) testing and prevalence is available from two sources: the Unlinked Anonymous Monitoring (UAM) Survey of People Who Inject Drugs (PWID), and Public Health Wales Harm Reduction Database (HRD) Blood Borne Virus module.

14.2.1 Unlinked Anonymous Monitoring Survey of people who inject drugs

The Unlinked Anonymous Monitoring (UAM) Survey of People Who Inject Drugs (PWID), is an annual survey of PWID accessing specialist drug services in England, Wales and Northern Ireland, co-ordinated by UK Health Security Agency (UKHSA).²³ The UAM carries out a dry blood spot test for hepatitis B and C and HIV, in addition to requesting that participants complete an anonymous survey on risk behaviours. In 2022, there were 100 UAM survey participants in Wales.²⁴ In 2020, recruitment to the UAM Survey was limited due the COVID-19 pandemic resulting in a change in the geographic and demographic profile of those taking part. The number of respondents remains much lower than before the COVID-19 pandemic.

Direct and indirect sharing

²³ Further information and data from the Unlinked Anonymous Monitoring Survey is available at <https://www.gov.uk/government/publications/people-who-inject-drugs-hiv-and-viral-hepatitis-monitoring/unlinked-anonymous-monitoring-uam-survey-of-hiv-and-viral-hepatitis-among-people-who-inject-drugs-pwid-2023-report#results>

²⁴ Not every question was answered by all interviewees

A total of 7.1 per cent of respondents reported direct sharing of injecting equipment (needles and syringes previously used by someone else) during the last 28 days, a decrease from the previous year. However, only 42 individuals responded to this question. This rose to 26 per cent when accounting for direct and indirect sharing (injecting paraphernalia including filters and cookers) in the last 28 days.

Prevalence of blood borne virus infection amongst people who inject drugs

Hepatitis B

In 2022, a total of 5 of 96 respondents in Wales provided dry blood spots which tested positive for hepatitis B (hepatitis B core antigen), a rate of 5.2 per cent, down from 7.8 per cent in 2020. This represents a substantial decrease compared to the last six years, where the average proportion has been 8.4 per cent positive. The uptake of hepatitis B vaccination amongst UAM participants in Wales was reported at 58.6 per cent (n= 58/99) in 2022, lower than previous years.

Hepatitis C

The proportion with reactive test results for hepatitis C antibodies was 64.2 per cent (n=61/95 respondents). Infection rates for hepatitis C have risen substantially in Wales over the last decade, from 26 per cent in 2010. It is hoped that following the advent of highly effective, available and tolerable treatment, along with the introduction of routine community opt-out testing, diagnosis and referral to treatment, this trend will be reversed in the coming years.

HIV

In 2022, the rate of HIV infection was 1.0 per cent amongst those from Wales participating in the UAM, an increase from 0.93 per cent recorded in 2019. In addition to data from the UAM, Public Health England reports the number of new diagnoses of HIV in the UK and constituent countries on an annual basis, along with the probable reason for exposure to the virus where known. In 2022, there were 101 new cases of HIV amongst Welsh residents. Probable exposure data indicated that <5 of the new cases in 2022 were reported to be a consequence of injecting drug use.²⁵

²⁵ UK Health Security Agency (2023) HIV testing, PrEP, new HIV diagnoses and care outcomes for people accessing HIV services. Available at <https://www.gov.uk/government/statistics/hiv-annual-data-tables>

14.2.2 Harm Reduction Database: Blood Borne Virus module

The second source of data on blood borne virus infection amongst PWID is the Public Health Wales Harm Reduction Database (HRD) Blood Borne Virus module.²⁶ This national surveillance system records all patient-level activity relating to blood borne viruses in substance misuse and related community services, from screening to treatment outcomes over time. It was developed to compliment and support the implementation of routine opt-out screening across Wales as part of the Welsh Government's action to achieve WHO Hepatitis C elimination targets.²⁷

In 2022-23, the sixth year of data collection, it is important to note that this is the second year since the BBV testing all but ceased across Wales due to the COVID-19 pandemic. Testing has increased since the pandemic. In 2022-23 there were:

- 4,052 individuals tested for hepatitis C within specialist substance misuse services, of which 3,353 had valid anti-HCV test results. Of these, 16.1 per cent (n=503) had antibodies detected (reactive). Amongst individuals who reported 'ever injecting drugs' the rate was 27.1 per cent.
- 3,928 individuals tested for hepatitis B. Less than 1 per cent of individuals screened positive for hepatitis B surface antigen (HBsAg).
- 3,910 individuals tested for HIV, any individual testing positive for HIV antibodies, indicative of infection, is referred immediately into specialist clinical treatment. There were six new cases of HIV identified in 2022-23.

14.3 Estimates of problematic drug use in Wales

In Wales, Public Health Wales undertake an annual estimate of problematic drug use (PDU) using a definition adapted from 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]".²⁸ Work is ongoing to publish the latest estimate of PDU. Headline figures for problematic drug use estimates in Wales in 2021-22, including populations not in contact with any services, suggest that the total number of problematic drug users in the period was 51,110 (95% confidence interval (CI)

²⁶ Public Health Wales: Harm reduction database - Prevention and detection of infectious disease amongst people accessing substance misuse services. Available at <http://www.wales.nhs.uk/sitesplus/888/page/72997>

²⁷ Welsh Health Circular: Attaining the WHO targets for eliminating hepatitis (B and C) as a significant threat to public health. Available at <https://www.gov.wales/sites/default/files/publications/2023-01/WHC%20-%20Eliminating%20Hepatitis%20B%20and%20C%20as%20a%20public%20health%20concern%20in%20Wales%20-%20Actions%20for%2022%20and%2023%20and%2023%2024.doc%20%28002%29.pdf>

²⁸ EMCDDA (2004) Recommended Draft Technical Tools and Guidelines - Key Epidemiological Indicator: Prevalence of problem drug use. Lisbon: EMCDDA, 2004. Available at <http://www.emcdda.europa.eu/stats07/PDU/methods>

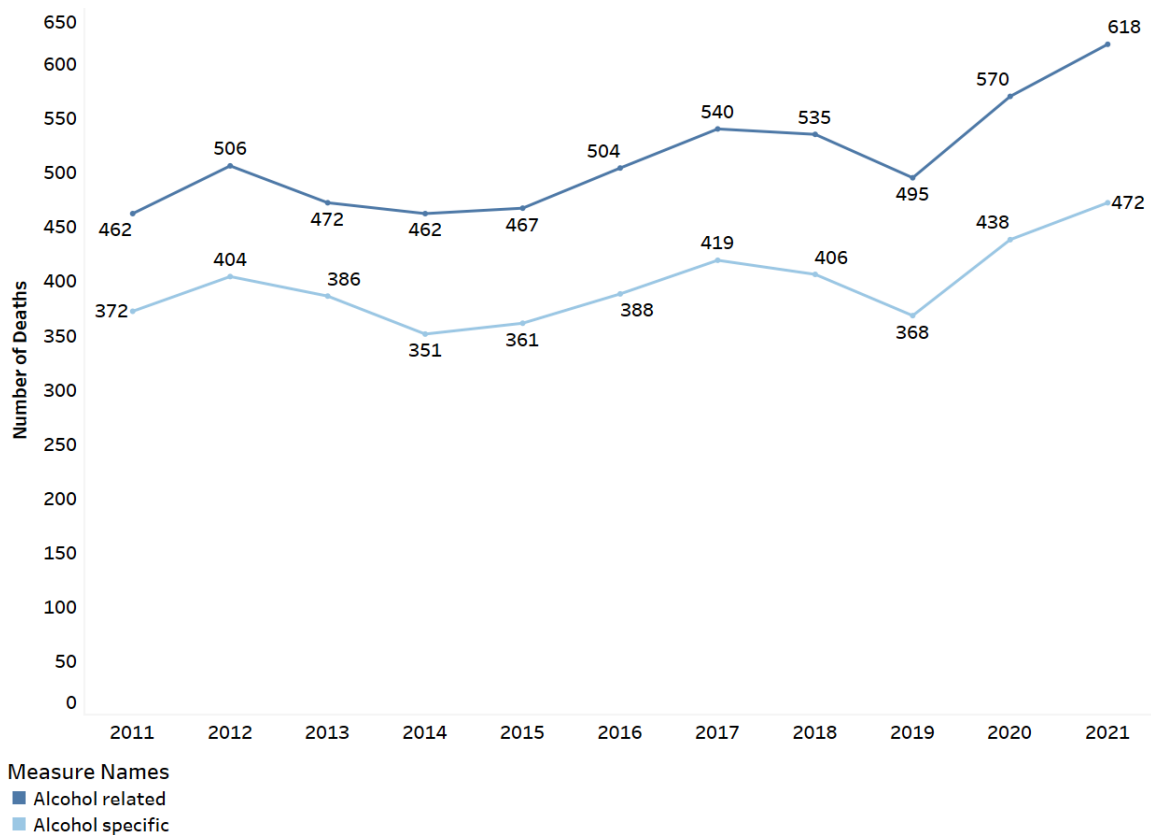
38,100 – 68,340. Details of the methods used to produce PDU figures for Wales is given in Appendix G.

15. Alcohol related deaths

15.1 Alcohol-specific deaths by year of registration

As described in Appendix B, there are two methods of calculating alcohol-related deaths: one used by the Office for National Statistics (ONS) and the other using Alcohol-Attributable Fractions (AAF). This subsection of alcohol-specific deaths describes deaths by year as counted utilising ONS data. This allows for comparison with reports in previous years and with figures from other UK countries. There has recently been an update to the definition of an alcohol-specific compared to an alcohol-related death, which has been used in this report in previous years. Both are presented here for continuity. Subsequent subsections will present more detailed figures produced by the Digital Health and Care Wales (DHCW) using the AAF method.

Alcohol-related and alcohol-specific deaths data was not available from ONS for the most recent year. Using the ONS definition, in 2021 there were 618 alcohol-related deaths and 472 alcohol-specific deaths registered in Wales. This represents an increase of 8.4 and 7.8 per cent respectively compared to the previous year. Of the alcohol-specific deaths, 68.8 per cent (n=325) of deaths involved males. Chart 39 shows the number of alcohol-specific deaths registered in Wales in each of the past ten years up to 2021 using the ONS method by year.

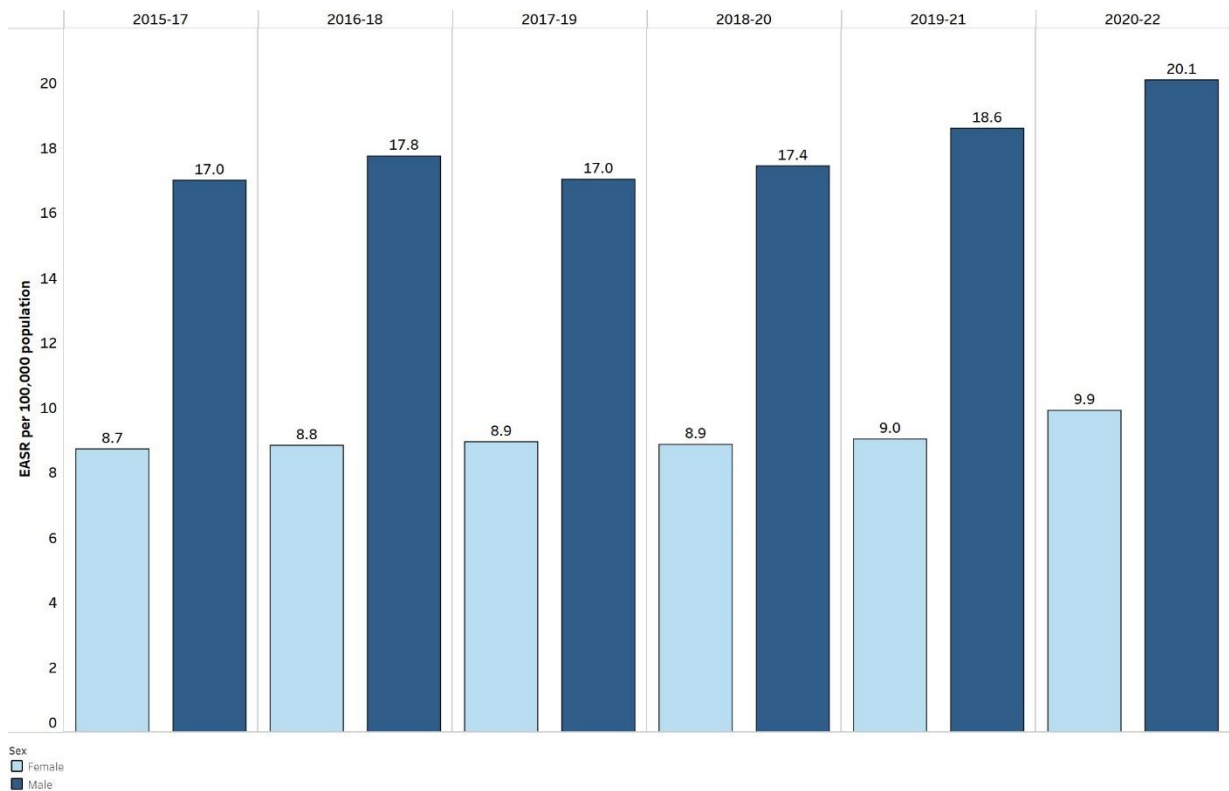


Source: Office for National Statistics, 2022

Chart 39: Number of alcohol-specific deaths by registered year of death in Wales 2011-2021.

15.2 Rates of alcohol-specific deaths in Wales by sex and health board area of residence

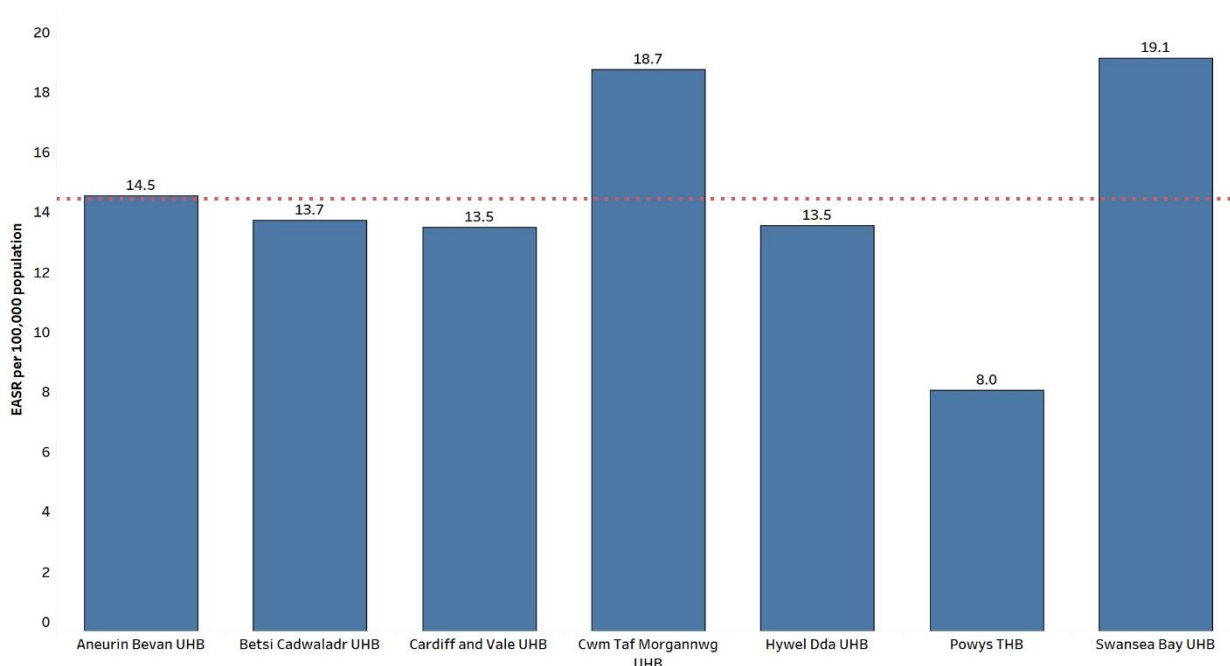
The three-year rolling average of deaths from alcohol-specific causes over the most recent six-year reporting period shows that the EASR of deaths per 100,000 population has increased since 2015-17, from 17.0 deaths per 100,000 population in males to 20.1 in 2020-22. The rates have risen in both males and females compared to the previous year.



Source: Office for National Statistics and Digital Health and Care Wales, 2024

Chart 40: European age standardised rate of alcohol-specific deaths registered in year, Wales, three-year rolling averages, by years and sex

There was considerable geographic variation in three-year rolling average of alcohol-specific deaths for 2020-22, as can be seen in Chart 41. Trends remain similar to previous years.

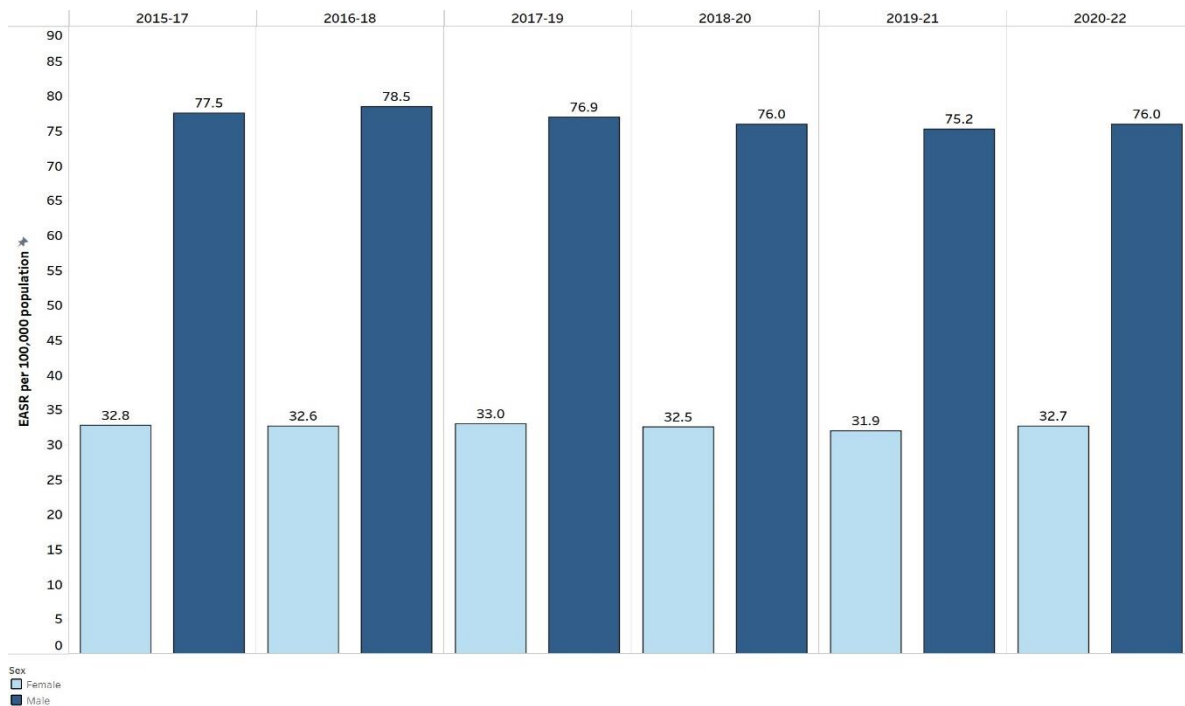


Source: Office for National Statistics and Digital Health and Care Wales, 2024

Chart 41: European age standardised rate of alcohol-specific deaths, Wales, three-year rolling averages, deaths registered in 2020-22, by health board

15.3 Alcohol-attributable mortality

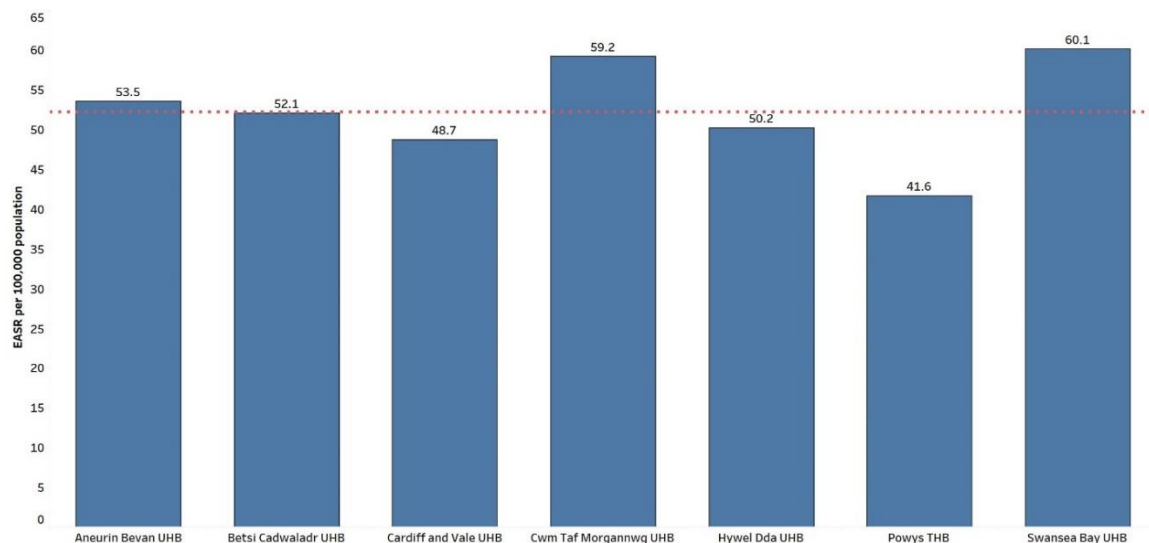
For 2020-22, the EASR of alcohol-attributable mortality in Wales was 52.9 deaths per 100,000 population, an increase of 1.8 percent compared to 2013-15. The rolling average rates of alcohol-attributable mortality are shown in Chart 42. The EASR for 2020-22 increased amongst males by 1.2 per cent and 2.5 per cent amongst females from the previous three-year period (2019-21).



Source: Office for National Statistics and Digital Health and Care Wales, 2024

Chart 42: European Age Standardised Rate of alcohol-attributable deaths, AAF method, Wales, three-year rolling averages, by sex and year of death registered, 2015-17 to 2020-22.

Chart 43 shows alcohol-attributable mortality by health board for the three-year rolling average period 2019-21. The pattern amongst health boards is similar to that for alcohol-specific mortality described above, although the differences between health boards are proportionately smaller.



Source: Office for National Statistics and Digital Health and Care Wales, 2024

Chart 43: European age standardised rate of alcohol-attributable deaths, AAF method, Wales, three-year rolling average, deaths registered in 2020-22, by health board

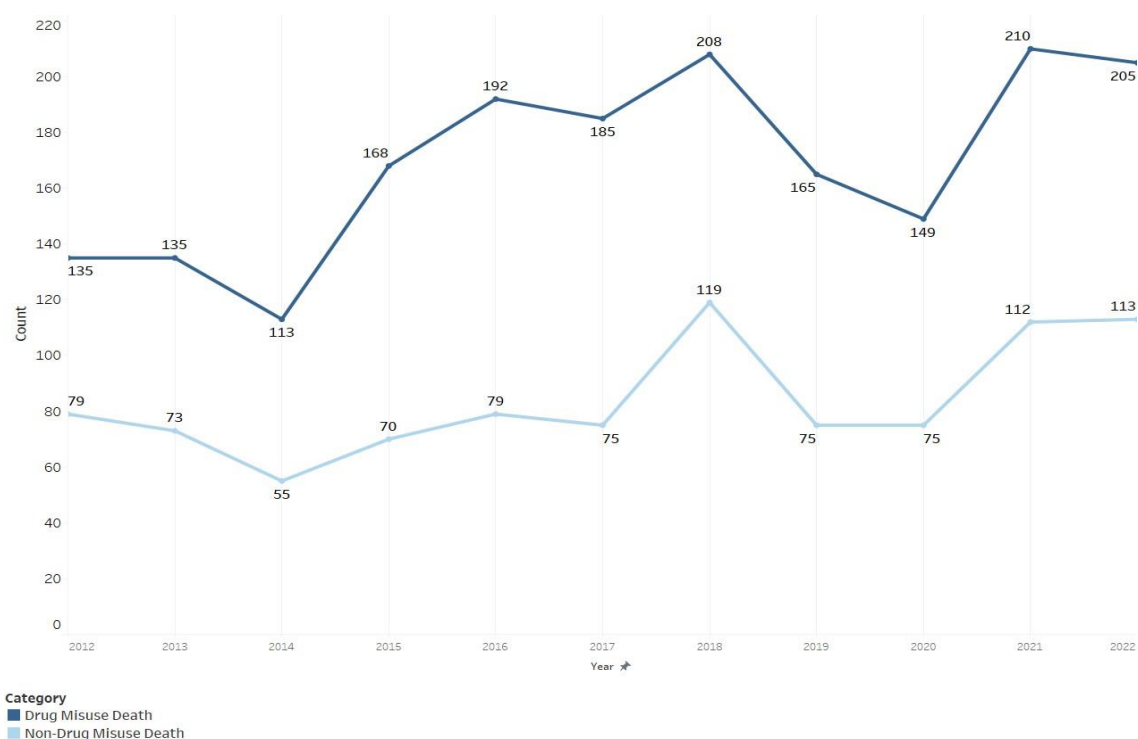
16. Drug related deaths

The Office for National Statistics (ONS) reports two main measures in relation to drug deaths. 'Deaths related to drug poisoning' which includes all deaths in which the underlying cause references an ICD-10 related to both licit and illicit drugs (not including alcohol and tobacco). 'Deaths related to drug misuse' is the subset of drug poisoning deaths involving only illicit drugs. A more detailed description of these measures is provided in Appendix D. Due to delays in reporting drug deaths, all figures in this section are for deaths registered in a given year and not the year of death.²⁹ Mortality rates for 2012 to 2021 have been revised due to changes in official population estimates, therefore figures for these years may not be inconsistent with previously published reports. Since raw mortality data from ONS was not available, figures are based on summary data, thus age and year may be grouped differently from previous reports.

16.1 Deaths by drug poisoning and drug misuse deaths by sex and age group

In 2022, 318 deaths due to drug poisoning were registered in Wales, a decrease of 1.2 per cent from the previous calendar year. Of all drug-poisoning deaths, 205 (64.5 per cent) were identified as a drug misuse death, remaining high with only a slight decrease from the previous year.

²⁹ Public Health Wales: Drug related deaths 2022. Available at <https://phw.nhs.wales/publications/publications1/harm-reduction-database-wales-drug-related-mortality/>



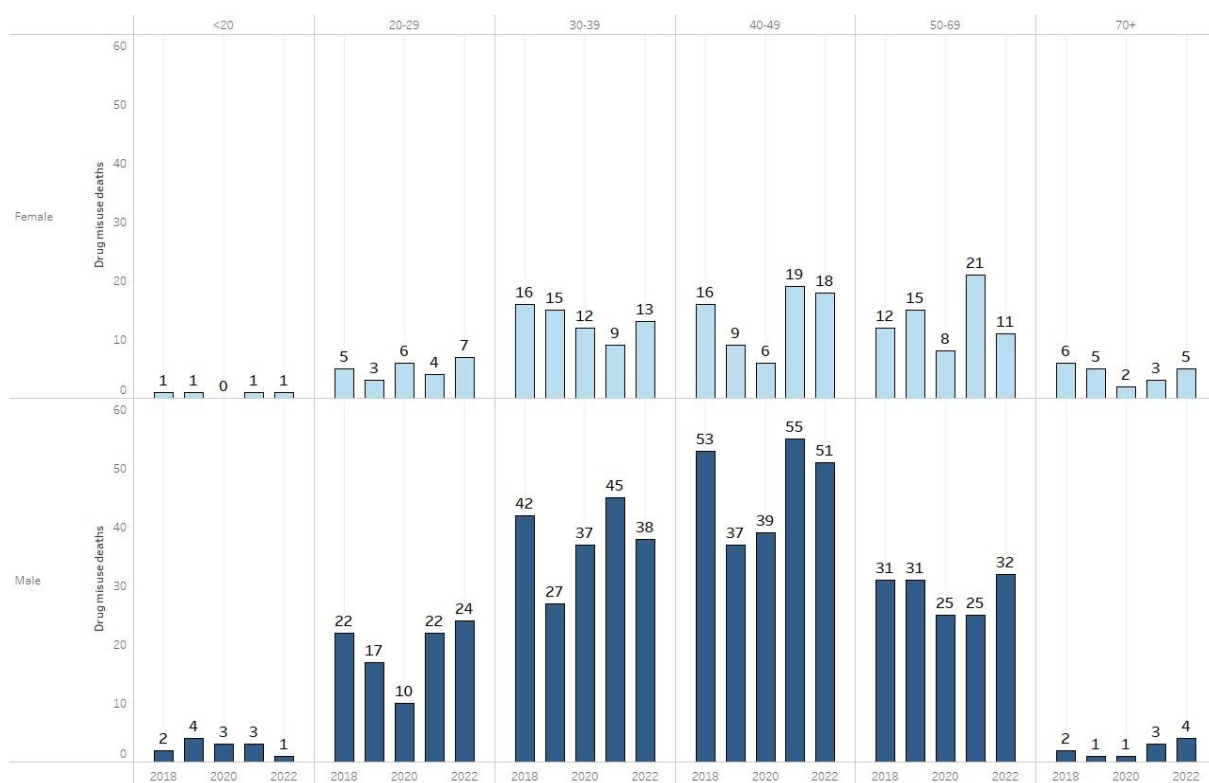
Source: Office for National Statistics, 2023

Chart 44: Number of drug poisoning and drug misuse deaths in Wales by year of registration 2012-22

16.2 Drug misuse deaths by sex and age group

As shown in Chart 45, the most common age group for drug misuse deaths is between 40 and 49, representing 33.7 per cent of all drug misuse deaths. The number of deaths involving individuals under the age of 20 has decreased to the lowest point in the past four years, though deaths among individuals between 20 and 30 has increased.

As with previous years there were more deaths in 2022 involving males than females, although deaths were equal amongst males and females under 20. There were more drug misuse deaths in older people (over 70 years) in females than males.



Source: Office for National Statistics, 2023

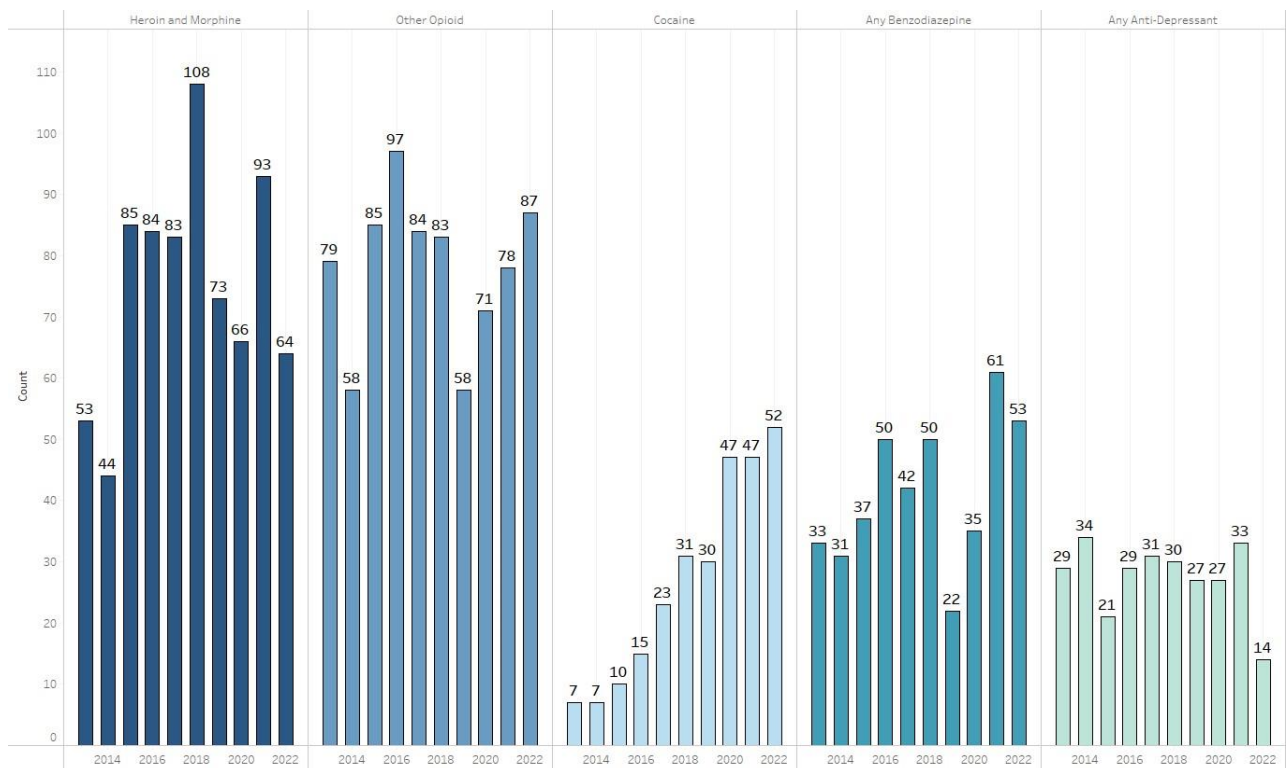
Chart 45: Number of drug misuse deaths in Wales by specified age group and sex for deaths registered in 2018-2022.

16.3 Drug poisoning deaths by substances reported

Note: More than one substance may be recorded for each death. The figures in this section relate to all drugs recorded and therefore a death may be represented in more than one substance group. Figures for drug misuse deaths were unavailable by substance so this section will use all drug poisoning deaths.

Deaths involving opioids remain by far the most common substance group in relation to drug poisoning deaths, predominantly deaths involving other opioids, as shown in Chart 47. The number of deaths involving heroin/morphine in 2022 has decreased from 93 deaths to 64. This is the lowest number of deaths recorded since 2014. However, the number of deaths involving other opioids in 2022 has increased from 78 deaths to 87.

The number of deaths involving cocaine has increased from 47 in 2021, to 52 in 2022, with decreases observed in the number of deaths involving benzodiazepines (61 to 53) and anti-depressants (33 to 14) from 2021 to 2022.

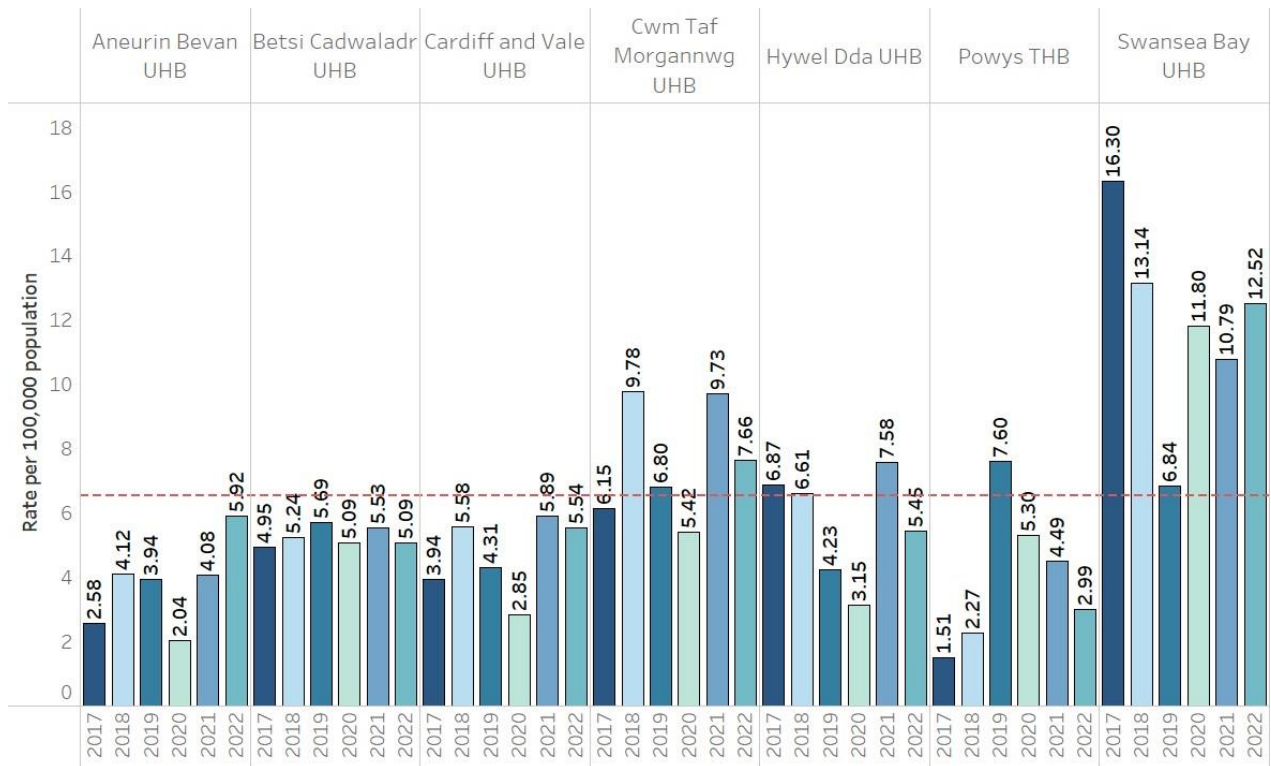


Source: Office for National Statistics, 2023

Chart 46: Number of drug poisoning deaths in Wales in which selected substances were recorded, deaths registered 2013-2022.

16.4 Drug misuse deaths by health board area

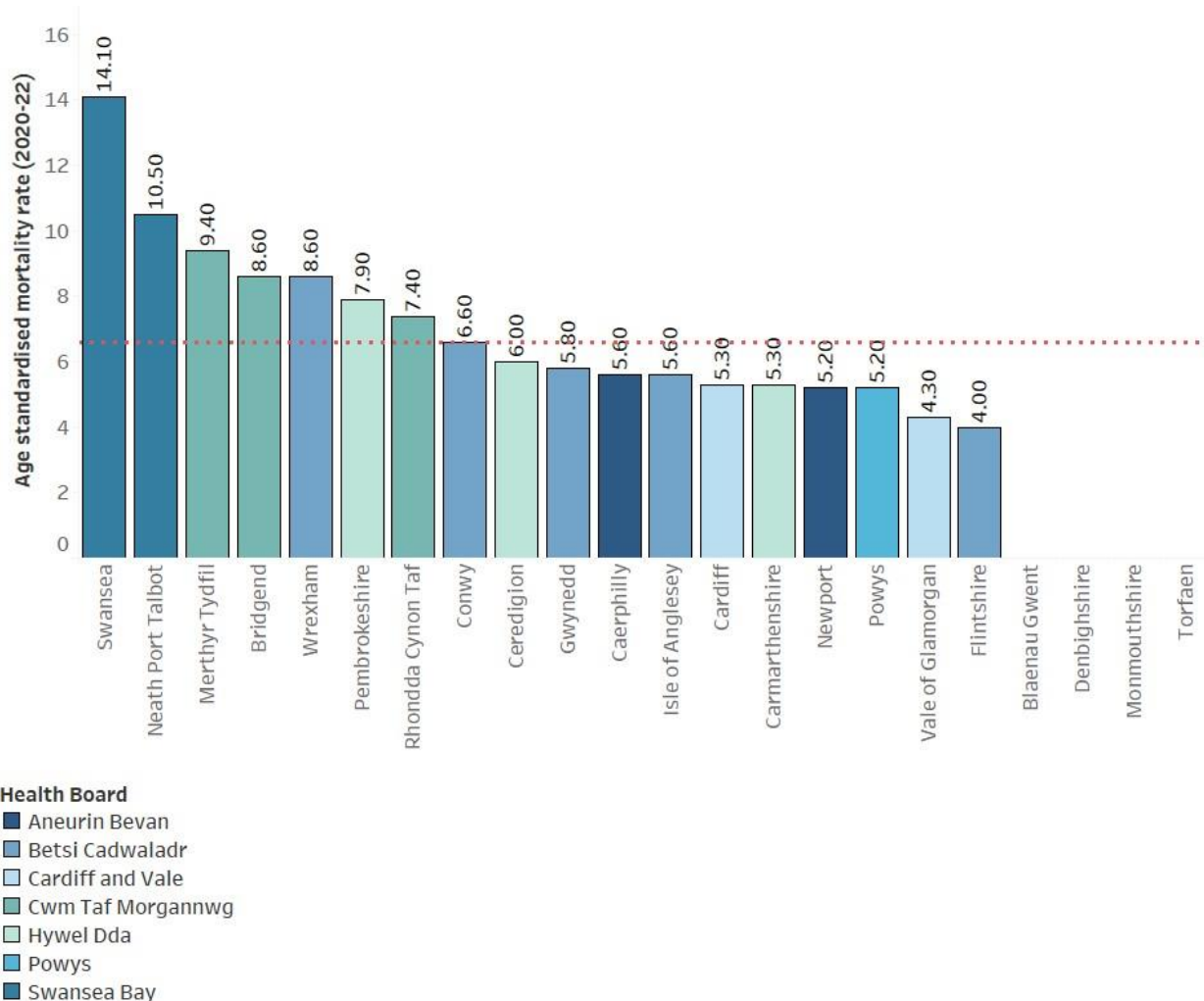
The rate for drug misuse deaths registered in 2022 in Wales was 6.5 deaths per 100,000 population compared with 6.8 deaths per 100,000 population in 2021. In 2022, the highest rate of drug misuse deaths was recorded in Swansea Bay University Health Board with a rate of 12.52 per 100,000 population. The rate per 100,000 population varied substantially across health board areas as shown in Chart 47. Please note that since line-level data was not available from ONS at time of publication, EASR could not be calculated at a health board level.



Source: Office for National Statistics, 2023

Chart 47: Rate per 100,000 population of deaths from drug misuse registered in Wales, by health board and year, 2017-2022, along with the national rate for 2022 (red).

Chart 48 shows the EASR per 100,000 population for 2020-22 by local authority.



Source: Office for National Statistics, 2023

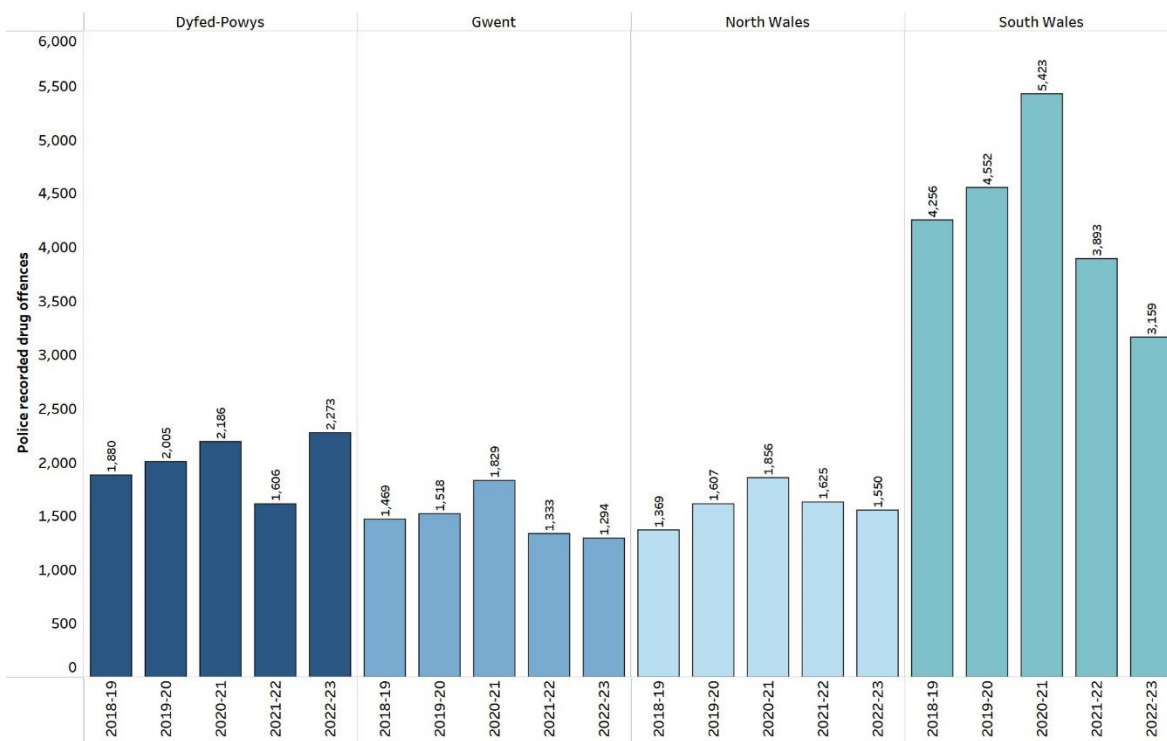
Chart 48: European Age Standardised Rate per 100,000 population of drug misuse deaths in Wales by Local Authority, three-year average for 2020-22, along with the national rates for Wales (red).

17. Police recorded drugs offences and purity of drugs seized by the police: all ages

17.1 Recorded drugs offences in Wales

Police Forces in Wales recorded a total of 8,276 drugs offences in Wales in 2022-23, a decrease of 2.1 per cent compared to 2021-22, a decrease seen across all areas of Wales.

As in previous years, South Wales recorded the greatest number of drug offences with 3,159 offences recorded, a decrease of 18.8 percent in 2022-23 compared to the previous year. The lowest proportional decrease was recorded Gwent, where the number of offences decreased by 2.9 per cent. However, Dyfed-Powys recorded the highest increase in drug offences of 41.5 per cent compared to the previous year. The number of drug offences recorded by Welsh Police Forces for the five years to 2022-23 is shown in Chart 49.³⁰

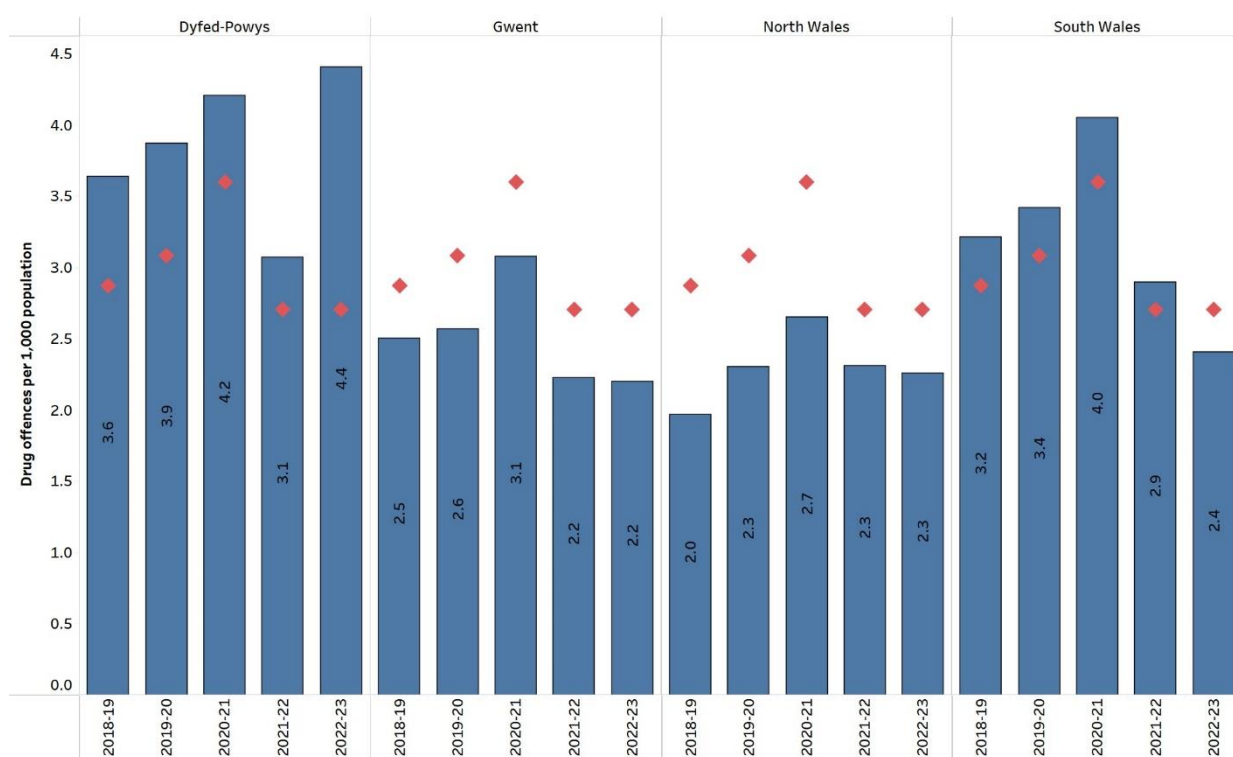


Source: Office for National Statistics, 2023

Chart 49: Number of drug offences recorded by police forces in Wales by year and police force, 2018-19 to 2022-23.

³⁰ The data for police activity in Wales was sourced from the Office of National Statistics and is available at <https://www.ons.gov.uk/peoplepopulationandcommunity/crimeandjustice/datasets/policeforceareadatatables>

However, the number of residents in these police territories varies considerably and, therefore, the rate of drug offences occurring in each area is a more appropriate comparable measure. In 2022-23, the highest rate per 1,000 population of drug offences was recorded in Dyfed-Powys, with 4.4 drug offences recorded per 1,000 population, up from 3.1 per 1,000 population the previous year. The lowest rate was recorded in Gwent, with 2.2 offences per 1,000 population. The overall rate of recorded drugs offences for Wales was 2.7 per 1,000 population. The rate of police recorded crimes by year and Police Force area for Wales is shown in Chart 50.



Source: Office for National Statistics, 2023

Chart 50: Rate per 1,000 population of drug offences recorded by Police Forces in Wales by year and police force, 2018-19 to 2022-23, with the Wales average rate (red dot).

17.2 Seizures of illicit drugs in Wales³¹

There were 7,449 seizures of illicit drugs by Police Forces in Wales in 2022-23, a decrease of 7 per cent compared to the previous year. This represents an average of 2.4 seizures per 1,000 population in Wales, a decrease from 2.6 per 1,000

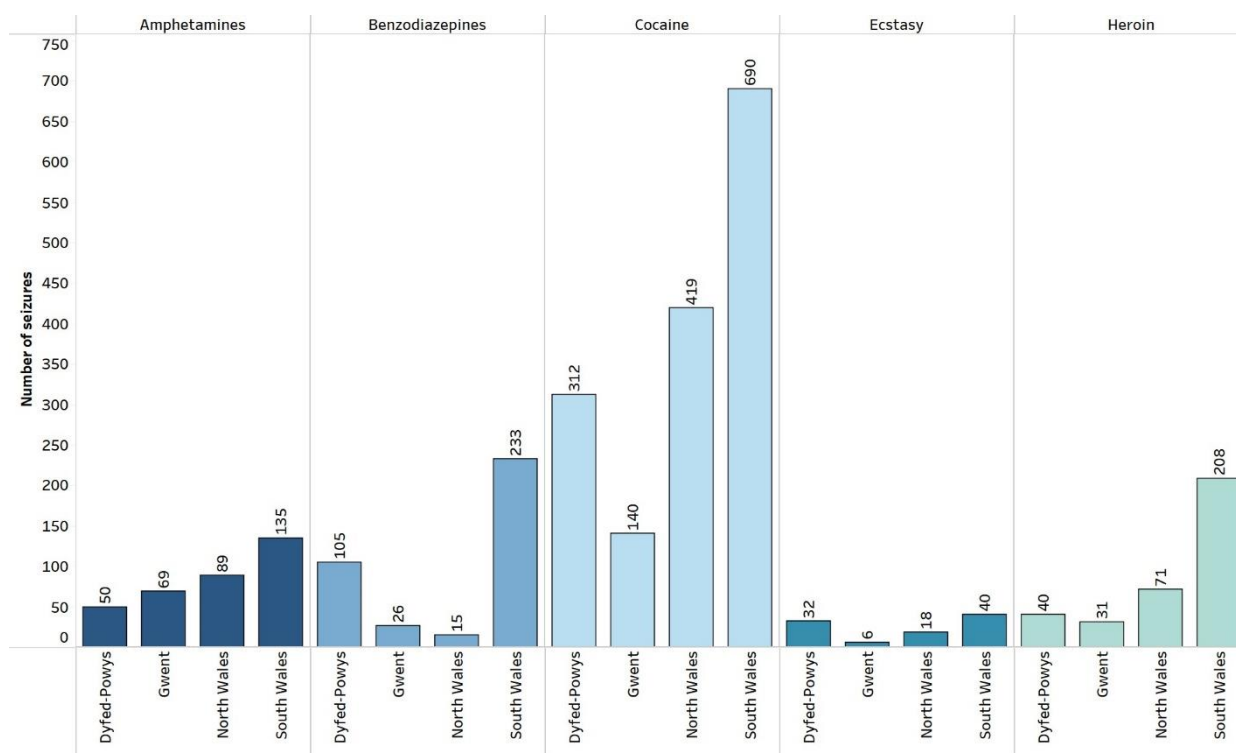
³¹ Home Office National Statistics. Seizures of drugs in England and Wales, financial year ending 2023. Available at <https://www.gov.uk/government/statistics/seizures-of-drugs-in-england-and-wales-financial-year-ending-2023/seizures-of-drugs-in-england-and-wales-financial-year-ending-2023>

population the previous year. The rate of seizures in England was 2.7 per 1,000 population. Of all seizures in Wales, 24.6 percent (n = 1,835) involved Class A substances.

The majority, 70.0 per cent, of seizures involved cannabis (n = 5,215), with a further 21.0 per cent of all seizures accounted for by cocaine or crack cocaine (n = 1,561), 4.7 per cent heroin and 4.6 per cent amphetamines.

South Wales Police accounted for 38.2 per cent of all seizures in Wales. South Wales Police also recorded higher proportions of seizures of Class A drugs including 59.4 per cent of all heroin seizures and 44.2 per cent of all cocaine seizures in 2022-23.

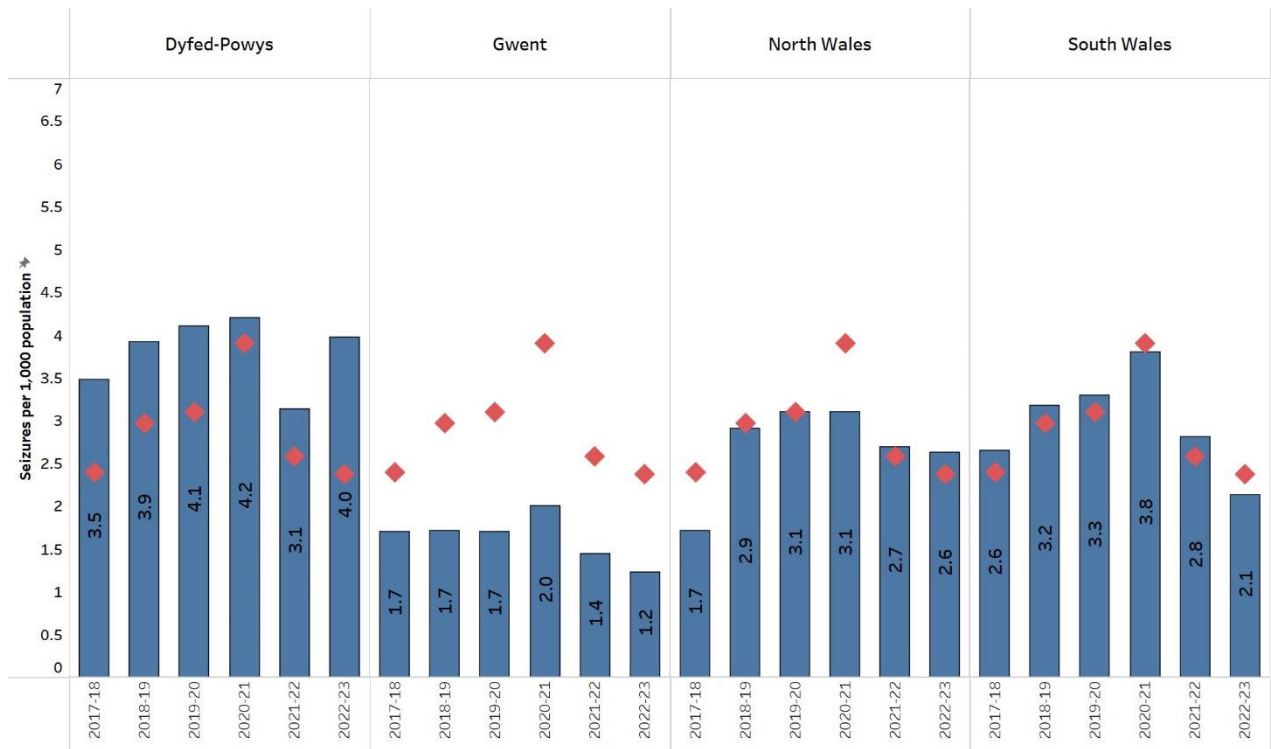
Wales accounted for 3.9 per cent of drug seizures occurring in England and Wales in 2022-23. The number of seizures recorded by police force in Wales for selected drugs is shown in Chart 51.



Source: Home Office, 2024

Chart 51: Number of seizures by Welsh Police Forces, 2022-23, selected drugs.

Chart 52 shows the rate of seizures per 1,000 population for each of the four Welsh Police Forces and the Wales average between 2017-18 to 2022-23.

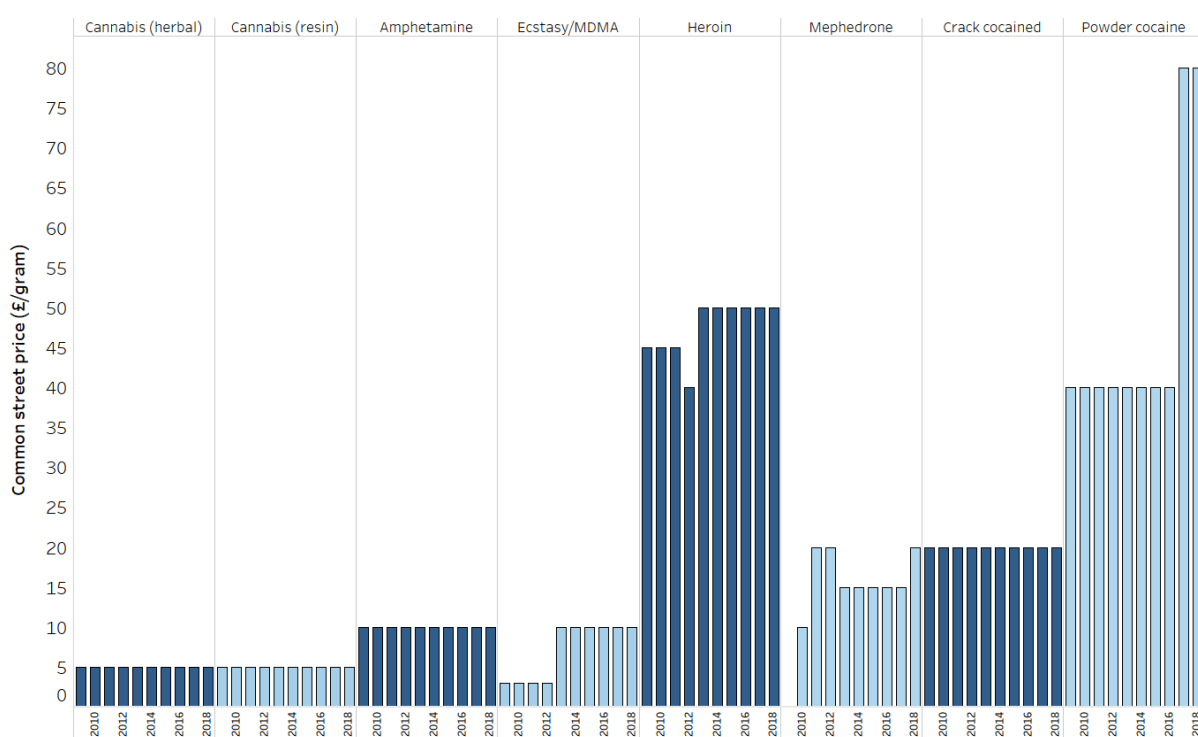


Source: Home Office, 2024

Chart 52: Rate of seizures of illicit drugs by Police Forces in Wales per 1,000 population, by police force and Wales average (red dot), 2017-18 to 2022-23.

17.3 Price and purity of selected illicit drugs – UK

Price and purity of selected drugs are reported by UK Focal Point, which provides data on drug trends to the European Monitoring Centre for Drugs and Drug Addiction (EMCDDA).³² In this context, purity of a drug describes the degree to which a quantity of the drug has remained free from other substances that may be added to increase the quantity and therefore resale value. Prices are calculated based on data from law enforcement agencies and are adjusted to reflect different levels of purity at different times. These data are not currently broken down by region, therefore the figures presented in this section relate to the UK as a whole. The most recent data available for price and purity are from 2018. Chart 55 shows the typical street prices of selected illicit drugs in the UK to 2018.



Source: UK Focal Point, 2020

Chart 53: Typical street price of selected illicit drugs based on law enforcement agency reports, UK, 2010-18³³.

Data for the UK suggests that drug prices have remained relatively stable in recent years for most substances. However, the price of powder cocaine doubled in price in 2017, from £40 a gram to £80, which may reflect the increase in overall purity.

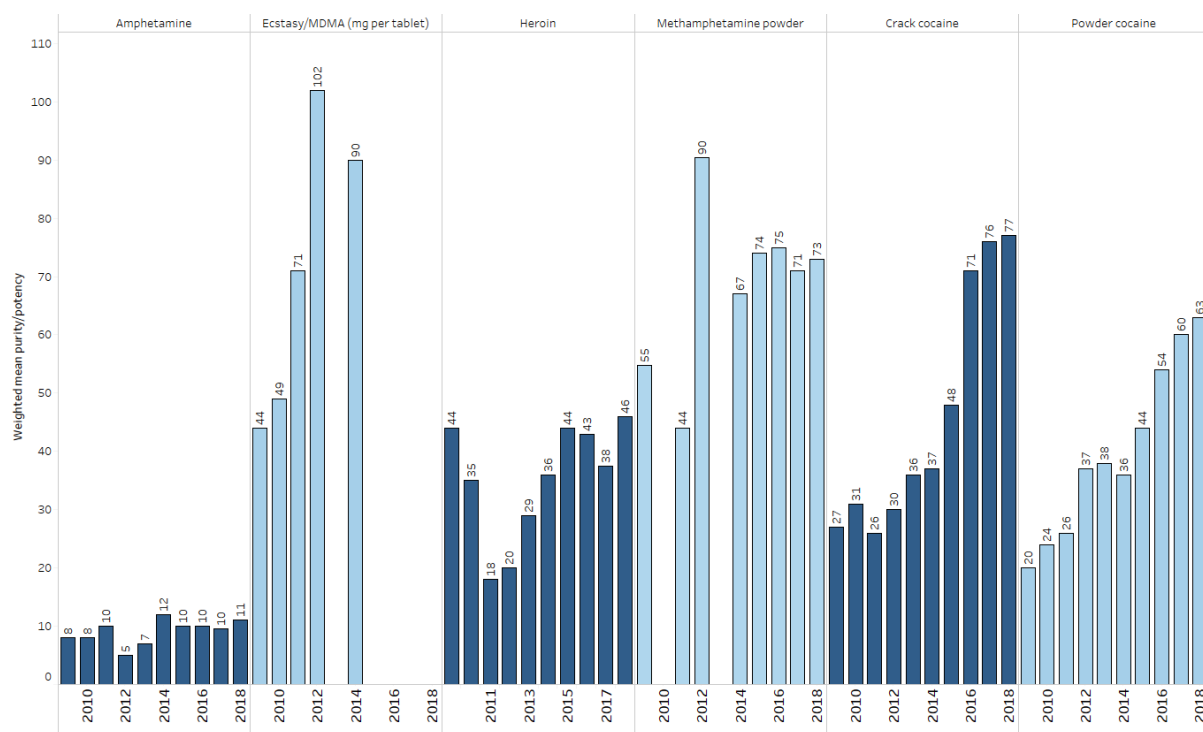
As shown in Chart 54, the purity of small quantity seizures of both cocaine and crack cocaine have been increasing since 2009 and reached a 10-year maximum in

³² UK Focal Point annual reports are available at <http://www.nta.nhs.uk/focalpoint.aspx>

³³ Data for Mephedrone was not available for 2013 to 2015.

2018. The purity of heroin has remained consistent between 2009 and 2018 at levels comparable to those observed before the heroin drought.

Although data on the mean purity of seizures of MDMA tablets is not available in the UK Focal point report, recent evidence from the EMCDDA indicates that the purity of MDMA generally remains stable across Europe.³⁴



Source: National Crime Agency, 2020

Chart 54: Mean percentage purity of small quantity drug seizures in England and Wales, 2008-18, by selected drugs³⁵.

³⁴ EMCDDA (2023) European Drug Report 2023: Trends and Developments. Available at <https://statics.teams.cdn.office.net/evergreen-assets/safelinks/1/atp-safelinks.html>

³⁵ Data for MDMA was not available for 2013, 2015 and 2016.

18. Appendices

Appendix A: Hospital admissions related to alcohol - definitions

When an individual is admitted to hospital, the period between admission and discharge or death is described as a 'spell'. A spell may be made up of a number of distinct 'episodes' during which the patient is under the care of a named consultant. A new episode will begin when a patient is transferred to the care of another consultant, whether this is because a different medical need has been identified, because the patient has reached a transition point in their recovery or need for care, or for some other reason. For each episode, the condition which is identified as the most relevant in relation to their admission or ongoing treatment is recorded by medical staff, alongside further, secondary conditions which affect treatment and any external factors which relate to the admission. These records are coded to a standard framework called the International Statistical Classification of Diseases and Related Health Problems, now in its tenth edition and therefore known as the 'ICD-10'. Full descriptions of the conditions associated with every ICD-10 code are available from the World Health Organization at <http://apps.who.int/classifications/icd10/browse/2010/en>.

There are four key dimensions for measuring the impact of alcohol on the health of the population and on the healthcare services that provide medical care through hospital admissions. These dimensions are described in Table 5.

Table 5: Dimensions used to measure impact of alcohol on populations and healthcare services

Dimension	Description and options
Selection of core ICD-10 codes	The choice of ICD-10 codes to include in analysis. For alcohol related admissions, this report uses ICD-10 codes originally produced by Centre for Public Health, Liverpool John Moores University ³⁶ and adopted by Public Health England ³⁷ . These are often referred to as 'Alcohol-attributable Fractions' (' AAF '). Note that analysis of alcohol related deaths in this report used both the AAF definition and the definition used by the Office for National Statistics (' ONS '). See Appendix B. A list of all AAF ICD-10 codes is shown in Table 6 below.

³⁶ Jones, L and Bellis, M (2013) Updating England-specific alcohol-attributable fractions, Centre for Public Health, Liverpool John Moores University. Available at https://fingertips.phe.org.uk/documents/2014_03 Updating England specific alcohol attributable fractions.pdf

³⁷ Public Health England (2015) Local Alcohol Profiles for England 2015 user guide. Available at <https://fingertips.phe.org.uk/profile/local-alcohol-profiles/supporting-information/resources>

<p>'Specific' or 'attributable'</p>	<p>'Alcohol-specific conditions' are commonly defined as those conditions, such as alcoholic liver disease, which are 100 per cent attributable to the use of alcohol. However, alcohol also plays a role in a wider range of 'alcohol-attributable conditions'. For example, it is estimated that alcohol plays a causative role in 25-33 per cent of cardiac arrhythmias, with the proportion varying by sex and age³⁸. Some external cause codes also have an alcohol-attributable fraction: it has been estimated that 27 per cent of assaults are alcohol-related³⁸. As described above, Alcohol-attributable fractions (AAF), describing the causative contribution accounted for by alcohol across the population have been calculated for a range of conditions and DHCW has used these fractions to produce figures for alcohol-attributable admissions which are presented in this report. 'Alcohol-attributable conditions' includes all 'alcohol-specific conditions', since these are by definition 100 per cent caused by alcohol. A list of all AAF ICD-10 codes is shown in Table 6 below.</p>
<p>Diagnostic position</p>	<p>Records can be counted if they include any relevant code in the primary diagnostic position or if they include any relevant code in any (primary or secondary) diagnostic position. When considering alcohol-specific conditions (see above) the measure most frequently used is admissions with an alcohol related condition in any position ('any position'); however, figures for admissions with an alcohol related condition in the primary position are also occasionally cited ('primary position').</p> <p>The methods for producing figures for alcohol-attributable conditions (see above) also involve calculating measures based on primary and secondary diagnosis; however, there are a number of differences between these calculations and those used to produce alcohol-specific figures. A 'narrow measure' includes all records in which the primary diagnosis was an alcohol-attributable condition, OR any secondary diagnosis was an 'external cause' (see Table 6 and Table 9). A 'broad measure' includes all records in which any alcohol-attributable condition appeared in any diagnostic position. In both cases, where more than one alcohol-attributable condition appears in the record, the condition with the highest alcohol-attributable fraction is selected.</p>

³⁸ Perkins, C and Hennessey, M (2014) Understanding alcohol-related hospital admissions. Chief Knowledge Officer, Public Health Matters blog, Public Health England. <https://publichealthmatters.blog.gov.uk/2014/01/15/understanding-alcohol-related-hospital-admissions/>

	Also, see below for interactions between diagnostic position and person/episode-based figures.
Person or admission based	<p>Figures can be calculated for the number of individuals admitted ('person-based') or for the total number of admissions ('admission-based'), bearing in mind that some individuals will be admitted more than once in a given time period. Person based measures may offer a more useful picture of the health of the population; admission-based figures may be more relevant when considering the burden that particular conditions place on services. In general, this report uses person-based measures.</p> <p>Following the conventions adopted by Public Health England, Public Health Wales counts person-based substance misuse admissions on the basis of a relevant ICD-10 code appearing for any episode of the spell. For admission-based figures, only admissions for which the relevant condition appears in the record for the admitting episode are included.</p>

There is a wide range of technical considerations relating to the development of measures over time and the methods of extracting and analysing data. Where comparisons between Wales and England are described in this report, figures are considered comparable; however, there may be minor differences in how data are defined and processed. For a more detailed discussion on how alcohol related admissions figures are produced for Wales, please see Public Health Wales Observatory (2014) Alcohol and health in Wales 2014, Technical Guide ([http://www2.nphs.wales.nhs.uk:8080/PubHObservatoryProjDocs.nsf/85c50756737f79ac80256f2700534ea3/65ed28d06e1f44fd80257d73002a4e75/\\$FILE/AlcoholAndHealthInWales_TechnicalGuide_v2a.pdf](http://www2.nphs.wales.nhs.uk:8080/PubHObservatoryProjDocs.nsf/85c50756737f79ac80256f2700534ea3/65ed28d06e1f44fd80257d73002a4e75/$FILE/AlcoholAndHealthInWales_TechnicalGuide_v2a.pdf))

For details on the production of figures for England, please see: Public Health England (2015) Local Alcohol Profiles for England 2015 user guide (http://www.lape.org.uk/downloads/LAPE%20User%20Guide_Final.pdf)

The most recent ICD-10 codes for alcohol-specific and alcohol-attributable conditions were published in 2013 and are set out in Table 6. Note that updated codes in the 2013 edition of the Alcohol-attributable Fractions added seven codes to the alcohol-specific set of codes set out in the previous (2008) edition which was used for previous versions of this report. These codes, noted in Table 3, together accounted for 250 admissions with an alcohol-specific diagnosis in any position in 2013-14, 1.6 per cent of the total.

Table 6: ICD-10 codes for alcohol-specific and alcohol-attributable conditions, as defined by the Alcohol-attributable Fractions (2013)

Condition	Code
<i>Alcohol-specific conditions (100 per cent caused by alcohol)</i>	
Alcohol-induced pseudo-Cushing's syndrome	E24.4
Mental and behavioural disorders due to use of alcohol	F10
Degeneration of nervous system due to alcohol	G31.2
Alcoholic polyneuropathy	G62.1
Alcoholic myopathy	G72.1
Alcoholic cardiomyopathy	I42.6
Alcoholic gastritis	K29.2
Alcoholic liver disease	K70
Alcohol-induced acute pancreatitis*	K85.2*
Alcohol-induced chronic pancreatitis	K86.0
Foetal alcohol syndrome (dysmorphic)*	Q86.0*
Excess alcohol blood levels*	R78.0*
Ethanol poisoning	T51.0
Methanol poisoning	T51.1
Toxic effect of alcohol, unspecified	T51.9
Accidental poisoning by and exposure to alcohol	X45
Intentional self-poisoning by and exposure to alcohol*	X65
Poisoning by and exposure to alcohol, undetermined intent*	Y15
Evidence of alcohol involvement determined by blood	Y90
Evidence of alcohol involvement determined by level of	Y91
<i>*Codes added to list of alcohol-specific conditions in 2013</i>	
<i>Partially alcohol-attributable conditions</i>	
<i>Chronic conditions</i>	
Infectious and parasitic diseases	
Tuberculosis	A15-A19
Malignant neoplasm	
Malignant neoplasm of lip, oral cavity and pharynx	C00-C14
Malignant neoplasm of oesophagus	C15
Malignant neoplasm of colorectal	C18-C20, C21
Malignant neoplasm of liver and intrahepatic bile ducts	C22
Malignant neoplasm of larynx	C32
Malignant neoplasm of breast	C50

Diseases of the nervous system	
Epilepsy and Status epilepticus	G40-G41
Cardiovascular disease	
Hypertensive diseases	I10-I15
Ischaemic heart disease	I20-I25
Cardiac arrhythmias	I47-I48
Haemorrhagic stroke	I60-I62, I69.0-I69.2
Ischaemic stroke	I63-I66, I69.3-I69.4
Oesophageal varices	I85
Respiratory infections	
Pneumonia	J10.0, J11.0, J12-J15,
Digestive disease	
Unspecified liver disease	K73, K74
Cholelithiasis (gall stones)	K80
Acute and chronic pancreatitis	K85, K86.1
Pregnancy and childbirth	
Spontaneous abortion	O03
Low birth weight	P05-P07
Acute conditions	
Unintentional injuries	
Road/pedestrian traffic accidents	*
Poisoning	X40-X49
Fall injuries	W00-W19
Fire injuries	X00-X09
Drowning	W65-W74
Other unintentional injuries	*
Intentional injuries	
Intentional self-harm	X60-X84, Y87.0
Event of undetermined intent	Y10-Y34, Y87.2
Assault	X85-Y09, Y87.1

In addition to reporting on numbers and rates for all alcohol-specific and alcohol-attributable conditions, this report also reports on three subcategories of alcohol related admissions: those related to foetal alcohol syndrome (FAS), foetal/maternal withdrawal from alcohol and other drugs of addiction and alcohol related brain damage (ARBD). The ICD-10 codes used to define these conditions in this report are shown in Table 7.

Table 7: ICD-10 codes used to define foetal alcohol syndrome, maternal withdrawal from alcohol and drugs of addiction and alcohol related brain damage in this report

Conditions	ICD-10 codes
Foetal alcohol syndrome	Q860
Foetal/maternal withdrawal from alcohol and drugs of addiction	P043, P044, P961
Alcohol related brain damage	E512, E52, F106, F107, G312, G621, K704, G371

Of particular interest in analysis of morbidity and mortality arising from drug and alcohol use are the ICD-10 codes related to 'Mental and behavioural disorders due to psychoactive drug use', coded F10-F19. Each three-figure code (F10, F11, etc.) relates to a specific substance or class of substances. An additional, fourth figure may be added to provide further detail concerning the condition from which an individual may be suffering. The fourth character details are summarised in Table 8.

Table 8: Details of conditions denoted by the fourth character of ICD-10 codes beginning with 'F'

Fxx0	<p>Acute intoxication</p> <p>A condition that follows the administration of a psychoactive substance resulting in disturbances in level of consciousness, cognition, perception, affect or behaviour, or other psycho-physiological functions and responses. The disturbances are directly related to the acute pharmacological effects of the substance and resolve with time, with complete recovery, except where tissue damage or other complications have arisen. Complications may include trauma, inhalation of vomitus, delirium, coma, convulsions, and other medical complications. The nature of these complications depends on the pharmacological class of substance and mode of administration.</p> <p>Acute drunkenness in alcoholism</p>
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	<p>"Bad trips" (drugs)</p> <p>Drunkenness</p> <p>NOS Pathological intoxication</p> <p>Trance and possession disorders in psychoactive substance intoxication</p> <p><i>Excludes:</i> intoxication meaning poisoning</p>
Fxx1	<p>Harmful use</p> <p>A pattern of psychoactive substance use that is causing damage to health. The damage may be physical (as in cases of hepatitis from the self-administration of injected psychoactive substances) or mental (e.g. episodes of depressive disorder secondary to heavy consumption of alcohol).</p> <p>Psychoactive substance abuse</p>
Fxx2	<p>Dependence syndrome</p> <p>A cluster of behavioural, cognitive, and physiological phenomena that develop after repeated substance use and that typically include a strong desire to take the drug, difficulties in controlling its use, persisting in its use despite harmful consequences, a higher priority given to drug use than to other activities and obligations, increased tolerance, and sometimes a physical withdrawal state.</p> <p>The dependence syndrome may be present for a specific psychoactive substance (e.g. tobacco, alcohol, or diazepam), for a class of substances (e.g. opioid drugs), or for a wider range of pharmacologically different psychoactive substances.</p> <p>Chronic alcoholism</p> <p>Dipsomania</p> <p>Drug addiction</p>
Fxx3	<p>Withdrawal state</p> <p>A group of symptoms of variable clustering and severity occurring on absolute or relative withdrawal of a psychoactive substance after persistent use of that substance. The onset and course of the withdrawal state are time-limited and are related to the type of psychoactive substance and dose being used immediately before cessation or reduction of use. The withdrawal state may be complicated by convulsions.</p>

Fxx4	<p>Withdrawal state with delirium</p> <p>A condition where the withdrawal state as defined in the common fourth character .3 is complicated by delirium as defined in F05.-. Convulsions may also occur. When organic factors are also considered to play a role in the etiology, the condition should be classified to F05.8.</p> <p>Delirium tremens (alcohol-induced)</p>
Fxx5	<p>Psychotic disorder</p> <p>A cluster of psychotic phenomena that occur during or following psychoactive substance use but that are not explained on the basis of acute intoxication alone and do not form part of a withdrawal state. The disorder is characterized by hallucinations (typically auditory, but often in more than one sensory modality), perceptual distortions, delusions (often of a paranoid or persecutory nature), psychomotor disturbances (excitement or stupor), and an abnormal affect, which may range from intense fear to ecstasy. The sensorium is usually clear but some degree of clouding of consciousness, though not severe confusion, may be present.</p> <p>Alcoholic:</p> <ul style="list-style-type: none"> · hallucinosis · jealousy · paranoia <p>Excludes: alcohol- or other psychoactive substance-induced residual and late-onset psychotic disorder (<u>F10-F19</u> with common fourth character .7)</p>
Fxx6	<p>Amnesic syndrome</p> <p>A syndrome associated with chronic prominent impairment of recent and remote memory. Immediate recall is usually preserved, and recent memory is characteristically more disturbed than remote memory. Disturbances of time sense and ordering of events are usually evident, as are difficulties in learning new material. Confabulation may be marked but is not invariably present. Other cognitive functions are usually relatively well preserved and amnesic defects are out of proportion to other disturbances.</p> <p>Amnesic disorder, alcohol- or drug-induced Korsakov's psychosis or syndrome, alcohol- or other psychoactive substance-induced or unspecified</p> <p>Excludes: nonalcoholic Korsakov's psychosis or syndrome (F04)</p>

Fxx7	<p>Residual and late-onset psychotic disorder</p> <p>A disorder in which alcohol- or psychoactive substance-induced changes of cognition, affect, personality, or behaviour persist beyond the period during which a direct psychoactive substance-related effect might reasonably be assumed to be operating. Onset of the disorder should be directly related to the use of the psychoactive substance. Cases in which initial onset of the state occurs later than episode(s) of such substance use should be coded here only where clear and strong evidence is available to attribute the state to the residual effect of the psychoactive substance. Flashbacks may be distinguished from psychotic state partly by their episodic nature, frequently of very short duration, and by their duplication of previous alcohol- or other psychoactive substance-related experiences.</p> <p>Alcoholic dementia NOS</p> <p>Chronic alcoholic brain syndrome</p> <p>Dementia and other milder forms of persisting impairment of cognitive functions</p> <p>Flashbacks</p> <p>Late-onset psychoactive substance-induced psychotic disorder</p> <p>Post hallucinogen perception disorder</p> <p>Residual:</p> <ul style="list-style-type: none"> · affective disorder · disorder of personality and behaviour <p>Excludes: alcohol- or psychoactive substance-induced:</p> <ul style="list-style-type: none"> · Korsakov's syndrome (<u>F10-F19</u> with common fourth character .6) · psychotic state (<u>F10-F19</u> with common fourth character .5)
Fxx8	<p>Other mental and behavioural disorders</p>
Fxx9	<p>Unspecified mental and behavioural disorder</p>

Appendix B: Alcohol related deaths - definitions

As described in Appendix A, there are two sets of figures available to describe alcohol related deaths, one used by Public Health England (the Alcohol-attributable Fractions, AAF) and one produced by the Office for National Statistics (ONS). Both methodologies define an 'alcohol related death' in terms of the 'underlying cause' (i.e. the cause which was identified by the attending doctor as having initiated the sequence of events that led to death) and do not consider the impact of other alcohol related conditions that may be mentioned on the death record. Both methodologies can be used to produce 'alcohol-specific' figures (i.e. including those conditions which are entirely attributable to alcohol – see Appendix A). As shown in Table 9, the ICD-10 codes (see Appendix A) used to define each set of 'alcohol-specific' figures overlap considerably, but are not identical.

Table 9: Conditions used to calculate alcohol related deaths, Alcohol-attributable Fractions and Office for National Statistics definitions. Note that the AAF conditions used to define alcohol-specific deaths are identical to those used to define alcohol-specific hospital admissions

Condition	ICD-10 Code	Included in ONS definition?	Included in ONS Alcohol specific definition?	Included in AAF definition?
Alcohol-induced pseudo-Cushing's syndrome	E24.4		✓	✓
Mental and behavioural disorders due to use of alcohol	F10*	✓	✓	✓
Degeneration of nervous system due to alcohol	G31.2	✓	✓	✓
Alcoholic polyneuropathy	G62.1	✓	✓	✓
Alcoholic myopathy	G72.1		✓	✓
Alcoholic cardiomyopathy	I42.6	✓	✓	✓
Alcoholic gastritis	K29.2	✓	✓	✓
Alcoholic liver disease	K70*	✓	✓	✓

Chronic hepatitis not elsewhere classified	K73*	✓		
Fibrosis and cirrhosis of liver	K74 (Excluding K74.3-K74.5 - Biliary cirrhosis)	✓		
Alcohol-induced acute pancreatitis	K85.2		✓	✓
Alcohol-induced chronic pancreatitis	K86.0	✓	✓	✓
Foetal alcohol syndrome (dysmorphic)	Q86.0		✓	✓
Excess alcohol blood levels	R78.0		✓	✓
Ethanol poisoning	T51.0			✓
Methanol poisoning	T51.1			✓
Toxic effect of alcohol, unspecified	T51.9			✓
Accidental poisoning by and exposure to alcohol	X45*	✓	✓	✓
Intentional self-poisoning by and exposure to alcohol	X65*	✓	✓	✓
Poisoning by and exposure to alcohol, undetermined intent	Y15*	✓	✓	✓
Evidence of alcohol involvement determined by blood alcohol level	Y90			✓
Evidence of alcohol involvement determined by level of intoxication	Y91			✓
*includes all four character codes falling under this three character code				

In addition to alcohol-specific mortality, the AAF methodology can be used to produce figures for 'alcohol-attributable' mortality. As described in detail in Appendix A, figures for 'alcohol-attributable' conditions reflect the fact that alcohol is implicated in a proportion of a range of medical conditions when considered across the entire population. DHCW uses the AAF methodology used to produce figures for alcohol-attributable mortality in Wales.

More detailed descriptions of the methodologies underlying these methods of producing alcohol related mortality figures can be found for the ONS at:

Office for National Statistics (2016) Alcohol-related deaths in the United Kingdom, registered in 2014. London, The Stationery Office
(<http://www.ons.gov.uk/peoplepopulationandcommunity/healthandsocialcare/causesofdeath/bulletins/alcoholrelateddeathsintheunitedkingdom/registeredin2014>)

Office for National Statistics (2016) User guide to mortality statistics. Newport, The Stationery Office
(<https://www.ons.gov.uk/peoplepopulationandcommunity/birthsdeathsandmarriages/deaths/methodologies/userguidetomortalitystatistics>)

And for Alcohol-attributable Fractions at:

Public Health Wales Observatory (2014) Alcohol and health in Wales 2014, Technical Guide
([http://www2.nphs.wales.nhs.uk:8080/PubHObservatoryProjDocs.nsf/85c50756737f79ac80256f2700534ea3/65ed28d06e1f44fd80257d73002a4e75/\\$FILE/AlcoholAndHealthInWales_TechnicalGuide_v2a.pdf](http://www2.nphs.wales.nhs.uk:8080/PubHObservatoryProjDocs.nsf/85c50756737f79ac80256f2700534ea3/65ed28d06e1f44fd80257d73002a4e75/$FILE/AlcoholAndHealthInWales_TechnicalGuide_v2a.pdf))

Jones, L and Bellis, M (2013) Updating England-specific alcohol-attributable fractions, Centre for Public Health, Liverpool John Moores University
(<http://www.cph.org.uk/wp-content/uploads/2014/03/24892-ALCOHOL-FRACTIONS-REPORT-A4-singles-24.3.14.pdf>)

Issues of comparability and consistency, both over time and between geographies, mean that both sets of figures are used.

Appendix C: Hospital admissions for poisoning by illicit drugs - definitions

For details of the different ways to measure hospital admissions for substance misuse in general, see Appendix A. This Appendix deals specifically with the different ICD-10 codes (see Appendix A) that are used to produce figures for poisoning by illicit drugs that appear in this report.

ICD-10 codes for illicit drugs are found in a number of different categories across the coding system. A number of different methodologies have been used to identify hospital admission records related to the use of specific drugs and also to provide headline figures that can be meaningfully compared over different time periods and geographies.

The ICD-10 codes used to define hospital admissions related to illicit drugs in this report are shown in Table 10 groups codes by substance and also presents the definitions used by NHS Digital, which produces comparable statistics for England.

Table 10: ICD-10 codes used to define hospital admissions for poisoning by illicit drugs in the primary position. Full details of ICD-10 codes can be found at: <http://apps.who.int/classifications/icd10/browse/2010/en>

Measure	ICD-10 codes
Any illicit drug use	F11-F16, F18, F19, T40, T424, T436
Any mental/behavioural condition (NHS Digital definition)	F11-F16, F18, F19
Any poisoning by illicit drugs (NHS Digital definition)	T400-T403, T405-T409, T436
Opioids	F11, T400-T403
	(Note that although T404 includes opioids such as pethidine and tramadol which may be used illicitly, this code has been excluded in line with current NHS Digital methodology. This exclusion may be reviewed in future years.)
Cannabinoids	F12, T407
Sedatives and hypnotics	F13, T408, T409
Cocaine	F14, T405
Other stimulants	F15, T436
Multiple drug use	F19
Benzodiazepines	T424

Appendix D: Drug related deaths - definitions

The figures for drug related deaths presented in this report are taken from data gathered by the Office for National Statistics (ONS). For details of how mortality data are gathered by the ONS see Appendix B. The ONS reports two measures of drug related death. 'Deaths related to drug poisoning' includes all deaths in which the underlying cause references an ICD-10 related to both legal and illegal drugs (not including alcohol and tobacco). 'Deaths related to drug misuse' is the subset of drug poisoning deaths which includes all deaths in which ICD-10 codes F11-F16 and F18-19 (i.e. those codes which specifically refer to illicit drugs) and the remaining deaths coded as drug poisoning where an illicit drug was mentioned on the death record. The ICD-10 codes used by the ONS to define drug related deaths are shown in Table 7.

'Illicit drugs' are defined in terms of the 1971 Misuse of Drugs Act, which may be amended by the Home Secretary to add or remove drugs. For the 2013 figures for deaths from drug misuse, the ONS used a list of 'illicit drugs' that contained 20 newly controlled drugs compared to the previous year. The ONS also recalculated the figures for deaths from drug misuse for previous years. This new methodology changed the number of deaths in Wales that are considered to be caused by drug misuse. For example, for 2012 the number of deaths rose from 131 using the old methodology to 135. Therefore, figures presented in this report may differ from figures presented in previous reports. A list of substances added to the definition of 'illicit drugs' for the ONS report on drug related deaths in 2013 is given in Table 8.

Table 11: ICD-10 codes used by the ONS to define 'drug related deaths'.

Condition	Code
<i>All deaths in which the following conditions are noted as the underlying cause</i>	
Mental and behavioural disorders due to opioids, cocaine, sedatives or hypnotics, cocaine, other stimulants including caffeine, hallucinogens, multiple drug use	F11–F16, F19
<i>All deaths in which the following conditions are noted as the underlying cause AND a drug controlled by the 1971 Misuse of Drugs Act is noted on the death record</i>	
Mental and behavioural disorders due to volatile solvents	F18
Accidental poisoning by drugs, medicaments and biological substances	X40–X44

Intentional self-poisoning by drugs, medicaments and biological substances	X60–X64
Assault by drugs, medicaments and biological substances	X85
Poisoning by drugs, medicaments and biological substances, undetermined intent	Y10–Y14

Office for National Statistics (2015) Deaths Related to Drug Poisoning in England and Wales, 2014. London, The Stationery Office

Office for National Statistics (2014) Deaths related to drug poisoning in England and Wales. Quality and methodology information. Newport, The Stationery Office

As described above, the term “new psychoactive substances” has been legally defined by the European Union as a new narcotic or psychotropic drug, in pure form or in preparation, that is not scheduled under the Single Convention on Narcotic Drugs of 1961 or the Convention on Psychotropic Substances of 1971, but which may pose a public health threat comparable to that posed by substances listed in those conventions. (Council of the European Union decision 2005/387/JHA). In 2016, the Office for National Statistics published a list of substances mentioned on death certificates in England and Wales. These substances are listed in Table 12.

Table 12: Substances listed by the Office for National Statistics as 'new psychoactive substances'

1-(Benzofuran-6-yl)-propan-2-amine	GHB
2-(1H-Indol-5-yl)-1-methylethylamine	Khat
4-Fluoroephedrine	Legal high
4-Fluoromethcathinone	Mephedrone
4-Methylamphetamine	Methiopropamine
4-Methylethcathinone	Methoxetamine
Alpha-methyltryptamine	Methylenedioxypyrovalerone
BZP	Methylone
Cathinone	Synthetic cannabinoid
Desoxypipradrol	TFMPP
Fluoromethcathinone	

Appendix E: Confidence intervals

The following description and definition of Confidence Intervals as they are used in public health is taken from the Association of Public Health Observatories Technical Briefing 3.³⁹

Confidence intervals

A confidence interval is a range of values that is used to quantify the imprecision in the estimate of a particular value. Specifically, it quantifies the imprecision that results from random variation in the estimation of the value; it does not include imprecision resulting from systematic error (bias). In many studies the source of this random variation is sampling. Even in the best designed studies there will be random differences between the particular sample group selected and the overall target population of inference.

Any measurement taken from the sample group therefore provides an imprecise estimate of the true population value. In public health many indicators are based on what can be considered to be complete data sets and not samples, e.g. mortality rates based on death registers. In these instances, the imprecision arises not as a result of sampling variation but of 'natural' variation. The indicator is considered to be the outcome of a stochastic process, i.e. one which can be influenced by the random occurrences that are inherent in the world around us. In such instances the value actually observed is only one of the set that could occur under the same circumstances. Generally, in public health, it is the underlying circumstances or process that is of interest and the actual value observed gives only an imprecise estimate of this 'underlying risk'.

The width of the confidence interval depends on three things:

- The sample size from which the estimate is derived (or population size if derived from a complete data set). Larger samples give more precise estimates with smaller confidence intervals.
- The degree of variability in the phenomenon being measured. Fortunately, observed phenomena often are known, or assumed, to follow certain probability distributions, such as the Poisson or Binomial. This allows us to express the amount of variability mathematically and build it into the confidence interval formulae.
- The required level of confidence - this is an arbitrary value set by the analyst giving the desired probability that the interval includes the true value. In medicine and public health, the conventional practice is to use 95 per cent confidence but it is not uncommon to see

³⁹ Association of Public Health Observatories (2008) Technical Briefing 3, Commonly Used Public Health Statistics and their Confidence Intervals, www.apho.org.uk/resource/view.aspx?RID=48457

alternatives. Within the APHO community 99.8 per cent confidence intervals are increasingly being used alongside 95 per cent intervals to reflect the control limits used in Statistical Process Control approaches. Increasing the level of confidence results in wider limits. For a given level of confidence, the wider the confidence interval, the greater the uncertainty in the estimate.

Appendix F: Calculating population rates of hospital admission, mortality and other public health indicators

The following description and definition of how population rates are calculated and used in public health has been adapted from the Association of Public Health Observatories Technical Briefing 3.⁴⁰

The most basic measure used in public health is a count of events such as deaths or admissions to hospital. However, to properly investigate the distribution of disease and risk factors and to make comparisons between different populations, the population at risk in which the count was observed must also be taken into consideration. Dividing the count of events by the population at risk and multiplying by given number (for example, 100,000) gives a 'crude rate' of these events within a population that can be compared between areas which may have very different population sizes. In particular, disease and mortality rates may vary widely by age. Such variation complicates any comparisons made between two populations that have different age structures. For example, consider two areas A and B with equal-sized populations and identical crude all-age death rates. At first glance they appear to have a similar mortality experience.

Suppose, however, that area A has a younger age structure than area B. Given that mortality rates increase with age, one would expect the older population in area B to experience more deaths. The fact that the two have identical rates means that the younger population in area A must have a relatively worse mortality experience.

The most comprehensive way of comparing the disease experience of two populations is to present and compare their age-specific rates. However, when the number of populations being compared increases, the volume of data that needs to be considered quickly becomes unmanageable. What is needed is a single, easily interpreted, summary figure for each population that is adjusted to take into account its age structure. Such summary figures are calculated using age standardisation methods.

One method of calculating a summary figure is 'direct standardisation'. The age-specific rates of the subject population are applied to the age structure of the standard population. This gives the overall rate that would have occurred in the subject population if it had the standard age-profile.

⁴⁰ Association of Public Health Observatories (2008) Technical Briefing 3, Commonly Used Public Health Statistics and their Confidence Intervals, www.apho.org.uk/resource/view.aspx?RID=48457

The European Standard Population (ESP) is often used for direct standardisation. This is a hypothetical population structure which does not change and is the same for both sexes. This report uses the 2013 ESP, published by Eurostat. Detailed information and guidance on the 2013 ESP has been published by the UK's Office for National Statistics and can be found here:
<http://www.ons.gov.uk/ons/guide-method/user-guidance/health-and-life-events/revised-european-standard-population-2013--2013-esp-/index.html>.

Appendix G: Problem drug use: definitions and estimations of prevalence

'Problem drug use' (PDU) is an indicator reported by the European Monitoring Centre for Drugs and Drug Addiction (EMCDDA) on the basis of national reports. The definition of PDU used for the estimates presented in this report is 'injecting drug use or long duration/regular use of opioids, cocaine and/or amphetamines'. This definition specifically includes regular or long-term use of prescribed opioids such as methadone but does not include their rare or irregular use nor the use of other drugs, such as ecstasy or cannabis.⁴¹

Estimating the prevalence of PDU presents considerable challenges, since a substantial proportion of those engaging in what is a heavily socially stigmatised activity may not be known to any services and therefore there may be no record of their use available. To address these issues a number of statistical techniques have been developed. The figures described in this report were derived from a study using the 'capture-recapture' method, a well-established approach that has been used to generate previous PDU estimates for Wales and the UK. Capture-recapture methods involve modelling interactions between datasets containing the substance misuse population that is 'visible' to health, treatment or criminal justice services to generate statistical estimates for the 'hidden' population who are not in contact with any service. The source datasets used were records of police arrests, engagement with drug intervention programmes managed by probation services, assessments by substance misuse treatment, hospital admissions and accessing statutory, voluntary and pharmacy needle and syringe programmes (NSPs). Estimates of PDU for Wales prior to those presented in last year's report have used three data sets (police arrests, probation assessment and treatment referrals) and are therefore not comparable to the estimates presented in this report.

The traditional statistical method to estimate how many drug users have not been 'captured' on any database is via the use of loglinear analyses, a technique which typically fits a series of different models to the data. The model deemed optimal via some criteria is used to obtain a 'maximum likelihood' estimate of 'uncaptured' drug users.

Whilst this approach is still used by many researchers, there is current debate within the field of drug misuse estimation over the possibility that recently developed Bayesian techniques for population estimation, which calculate an estimate of the uncaptured drug users using an average across all models, and

⁴¹ EMCDDA (2010), Statistical bulletin 2010: Problem drug use indicator – overview. Lisbon, EMCDDA . Available at https://www.emcdda.europa.eu/data/stats2023/methods/pdu_en

thus formally accounting for model uncertainty within the population estimate.⁴² The figures presented in this report are those derived from applying Bayesian techniques to the data.

⁴² King R, Bird SM, Overstall A, Hay G, Hutchinson SJ. Injecting drug users in Scotland, 2006: Listing, number, demography, and opiate-related death-rates. *Addict Res Theory* 2013; 21(3):235-246