

Data mining Wales:

The annual profile for substance misuse 2017-18

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

About Public Health Wales

Public Health Wales exists to protect and improve health and wellbeing and reduce health inequalities for people in Wales. We work locally, nationally and internationally, with our partners and communities.

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 prevent or reduce communicable and non-communicable disease, wider harms and premature death related to drugs and alcohol’.

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I. 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 NHS Wales Informatics Service, the Harm Reduction Database (HRD) Wales, the 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 people. 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.

The report also includes more detail on a wider range of measures than in previous years, reflecting the most recent developments in contemporary research on substance misuse. Notably, more detail is present this year on alcohol-specific and alcohol-attributable conditions at both a person and an admission level. As described in more detail in the Appendices, these measures taken together provide a detailed picture of the impact that alcohol has across the population over the life course and also the impact that alcohol related illnesses place on healthcare services.

Within Section I, 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 people (aged 50 years and above) and, where data is available, provide a geographic profile by health board and local authority. It is hoped that by doing so, 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 and the wider UK, as well as those with a broader interest in substance misuse, wider social determinants and implications.

2. Executive Summary

Population level trends

- The number of individuals admitted to hospital for alcohol-specific conditions are 2.4 times higher than admissions for illicit drug use.
- The number of individuals assessed within specialist substance misuse services in Wales in 2017-18 fell by 3.5 per cent compared to the previous year. Of all assessments, 51.7 per cent were primary problematic alcohol clients, and 47.6 per cent were primary problematic drug clients and the remainder reported problematic use of both drugs and alcohol.
- In relation to deprivation, the proportion of all patients admitted for alcohol-specific conditions living in the most deprived areas was 3.3 times higher than those from the least deprived areas. In relation to illicit drug use, this figure rose to 6.1 times higher.
- Compared to 2016, deaths from drug misuse decreased by 4.1 per cent to 185 deaths and alcohol deaths rose by 7.1 per cent to 540 deaths in 2017.

Children and young people (under 25)

- As at 31 March 2017, there were 4,035 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 615.
- There were 953 admissions involving young people aged under-25 with an alcohol-specific condition in 2017-18, a fall of 7.2 per cent compared with 2016-17. There was also a decrease in admissions for illicit drugs of 3.1 per cent amongst this age cohort in 2017-18.

Working aged adults (25-49 years)

- Amongst this age cohort, hospital admissions for alcohol-specific conditions have decreased by 6.8 per cent on the previous year and 22.4 per cent over the last decade. Admissions for illicit drugs have decreased by 2.3 percentage points on the previous year.
- Opioids continued to account for considerably more hospital admissions than any other illicit substance, representing 50.3 percent of admissions for illicit drugs in this age group.
- Substantial increases were seen in assessments in which cocaine / crack was reported as the primary problematic substance. Assessments for opioid use remain stable.

Older people (Aged 50 years and above)

- Individuals aged 50 and over made up 7.0 per cent of all those admitted to hospital in 2017-18 following illicit drug use. Admissions for alcohol-specific conditions remains stable.
- Within specialist substance misuse services, alcohol was the most frequently presenting problematic substance, representing 84.9 per cent of assessments (n=2,979). This compares with 10 percent (n=351) of assessments where opioids were reported as the main substance of use.

3. Headline population trends

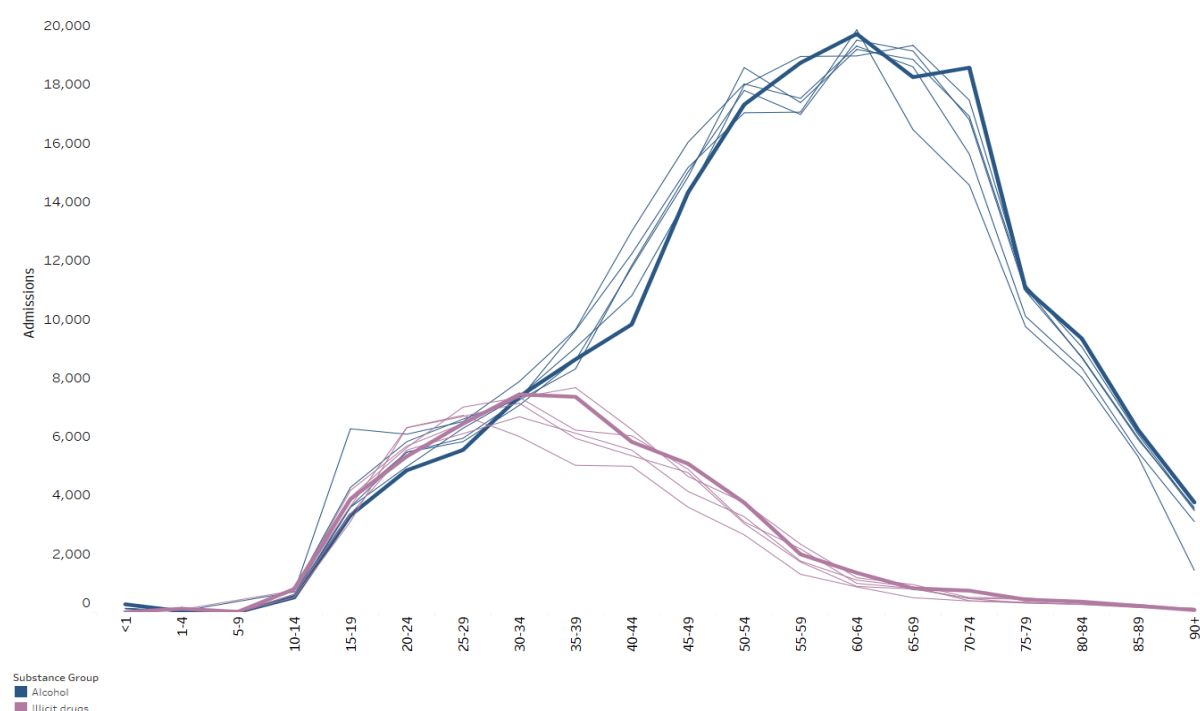
3.1 Alcohol-specific and illicit drug poisoning hospital admissions

Hospital admissions are a commonly used measure to describe 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 and C of this document.

Hospital admissions for alcohol-specific conditions and illicit drugs are shown by year in Chart I.¹ In 2017-18, there were:

- 6,506 hospital admissions related to illicit drugs involving 5,080 unique individuals.
- 14,588 alcohol-specific admissions involving 9,924 unique individuals.

As can be seen from Chart I, 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 30-34 age group, after which admission for illicit drugs fall steadily whilst those for alcohol related conditions continue to rise, peaking in the 60-64 year age group.



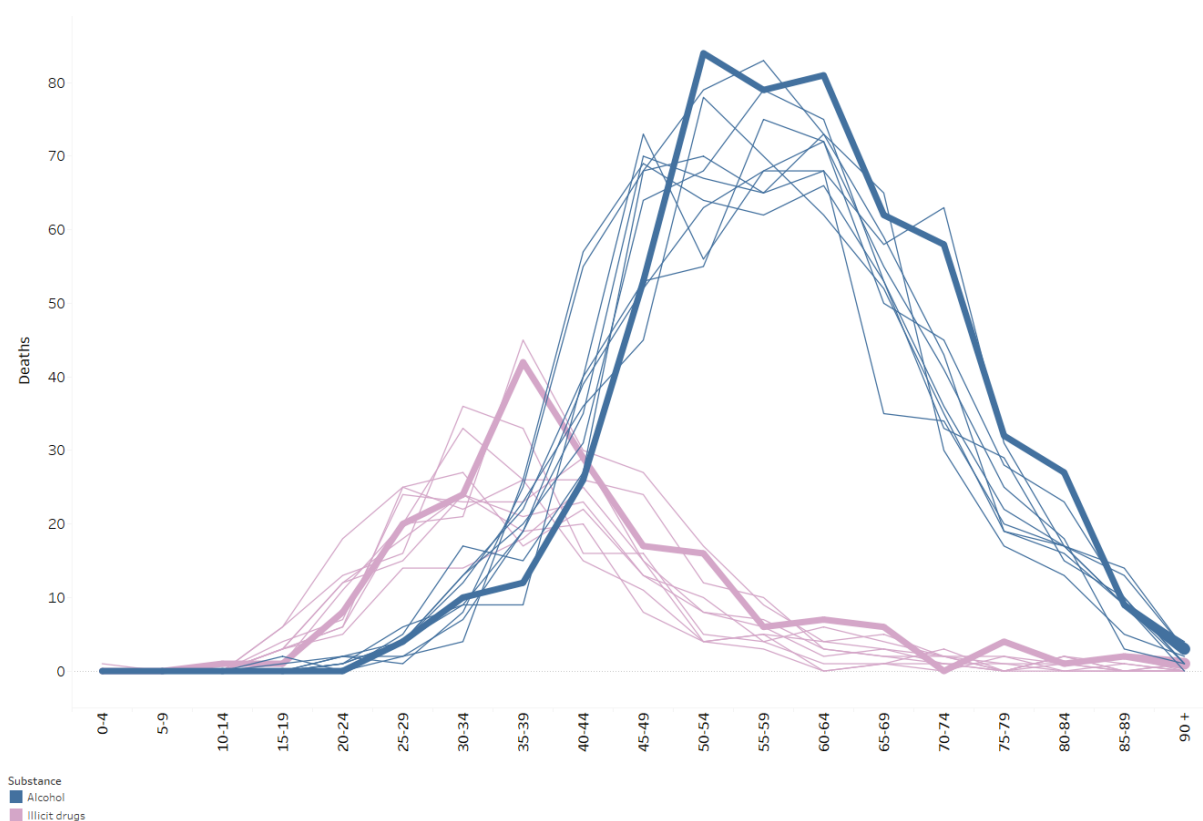
Source: Substance Misuse Programme / NHS Wales Informatics Service, 2018

Chart I: Hospital admissions for alcohol-specific conditions and illicit drugs, 2012-13 to 2017-18. Data for 2017-18 is highlighted.

¹ The number of admissions has increased for 2016 compared to the same figures reported in the 2016-17 annual profile. This was due to a system change in data reporting within Betsi Cadwaladr University Health Board (BCU), who were still submitting 2016-17 data during 2017-18.

3.2 Alcohol related deaths and deaths from drug misuse

Deaths from illicit drugs and alcohol show a distinct pattern of sharp increases, for illicit drug deaths peaking in the 35-39 age group and for alcohol deaths peaking within the 50-54 year age group, as shown in Chart 2. Deaths from illicit drugs occur amongst age ranges 15-19 to 65-69, with very low numbers recorded in elderly people, whilst a wider age range is observed for alcohol deaths, from 20-24 through to 90+ years.



Source: Office for National Statistics, 2018

Chart 2: Deaths from drug misuse and alcohol-specific conditions, Wales, 2008-2017, by age quintile. Data for 2017 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 9,924 unique individuals admitted with an alcohol-specific condition in any diagnostic position in 2017-18, accounting for 14,588 admissions. The number of unique individuals admitted for alcohol-specific conditions has fallen by 6.6 per cent over the last five years.

The European age standardised rate (EASR) of alcohol-specific admissions was 324 persons per 100,000 population, a decrease of 8.0 percent compared to 2013-14 (352 persons per 100,000). An alcohol-specific condition was recorded in the primary position in 3,361 admissions, 23.0 per cent. There were 2,644 individuals with an alcohol-specific condition recorded in the primary position, 26.6 per cent.

The number of unique individuals admitted for an alcohol-attributable condition in 2017-18 was 35,912 persons, a marginal decrease of 0.9 percent compared to the previous year. There has been little change in the number of individuals admitted over the last five years. The EASR for alcohol-attributable conditions was 1,142 per 100,000 population, three and a half times the rate for alcohol-specific conditions. An alcohol-attributable condition was recorded in the primary position for 12,726 individuals.

Table 1: Hospital admissions related to alcohol amongst Welsh residents, by indicator, sex and years 2013-14 to 2017-18

	Sex	2013-14	2014-15	2015-16	2016-17	2017-18
Number individuals admitted with an alcohol-specific condition in the any diagnostic position	All persons	10,616	10,209	10,095	10,297	9,924
	Male	6,954	6,629	6,610	6,716	6,431
	Female	3,662	3,580	3,485	3,581	3,493

Number admissions to hospital with an alcohol-specific condition in any diagnostic position	All persons	16,004	15,305	15,140	15,541	14,588
	Male	10,670	10,102	9,989	10,226	9,592
	Female	5,334	5,203	5,151	5,315	4,996
Alcohol-attributable admissions, broad measure, person based	All persons	35,077	34,933	35,279	36,240	35,912
	Male	22,456	22,255	22,572	23,237	22,955
	Female	12,620	12,677	12,708	13,003	12,957
Alcohol-attributable admissions, broad measure, episode based	All persons	53,756	53,939	54,269	56,007	54,949
	Male	35,644	36,295	35,175	36,295	35,649
	Female	18,757	18,954	19,094	19,712	19,301

Source: Substance Misuse Programme / NHS Wales Informatics Service, 2018

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

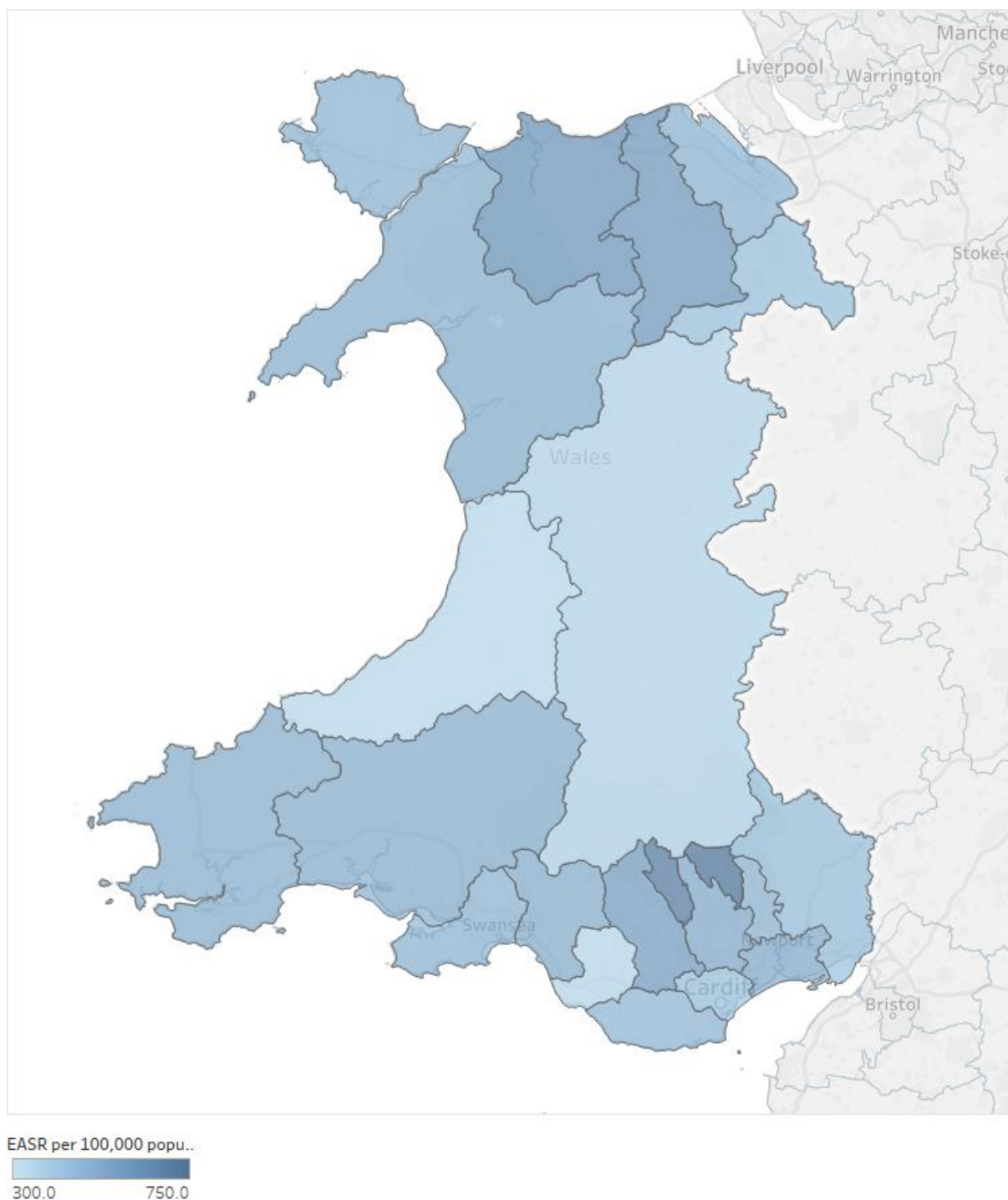
There was considerable geographical variation in directly standardised rates (see Appendix F) of alcohol-specific hospital admissions across Wales as shown in Table 2. Blaenau Gwent was the Local Authority area with the highest rate, with 462 per 100,000 population alcohol-specific hospital admissions. This is 1.9 times higher than the comparable rate recorded in Ceredigion (247 per 100,000 population).

Over the last year, 14 of the 22 local authority areas have seen a decrease in rates of individual alcohol-specific hospital admissions. The largest increase in rates were seen in Blaenau Gwent, with an increase of 6.2 per cent from the previous year. Figure 1 provides a visual representation of the EASR for alcohol-specific hospital admissions in 2017-18 by Local Authority area.

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, 2017-18, by Local Authority area

Health Board area	Local Authority area	EASR per 100,000 population 2017-18	Change since 2016-17	Change since 2013-14
Abertawe Bro Morgannwg	Bridgend	249.1	-5.8%	-20.3%
	Neath Port Talbot	335.5	2.4%	-0.1%
	Swansea	330.9	0.2%	-6.5%
Aneurin Bevan	Blaenau Gwent	462.4	6.2%	17.3%
	Caerphilly	357.7	-9.2%	-7.7%
	Monmouthshire	292.6	3.4%	16.2%
	Newport	338.6	-15.3%	-25.2%
	Torfaen	318.1	-10.2%	-11.2%
Betsi Cadwaladr	Conwy	364.9	-8.9%	-16.2%
	Denbighshire	386.8	-3.9%	-2.7%
	Flintshire	331.8	11.8%	-14.1%
	Gwynedd	318.7	-10.7%	-24.6%
	Isle of Anglesey	315.8	-11.5%	-27.7%
	Wrexham	295.2	-13.7%	-27.8%
Cardiff and Vale	Cardiff	306	3.6%	-5.3%
	Vale of Glamorgan	318.4	3.0%	-5.3%
Cwm Taf	Merthyr Tydfil	428.8	-7.9%	8.1%
	Rhondda Cynon Taf	367	3.7%	0.7%
Hywel Dda	Carmarthenshire	335.5	-10.4%	28.0%
	Ceredigion	246.7	-12.5%	-1.9%
	Pembrokeshire	309	-14.7%	-23.0%
Powys	Powys	248.5	-2.5%	4.6%
Wales	Wales	324	-4.0%	-8.0%

Source: Substance Misuse Programme / NHS Wales Informatics Service, 2018



Source: Substance Misuse Programme / NHS Wales Informatics Service, 2018

Figure 1: Hospital admissions for an alcohol-specific condition in any position, 2017-18, by Local Authority area, European Age Standardised Rate

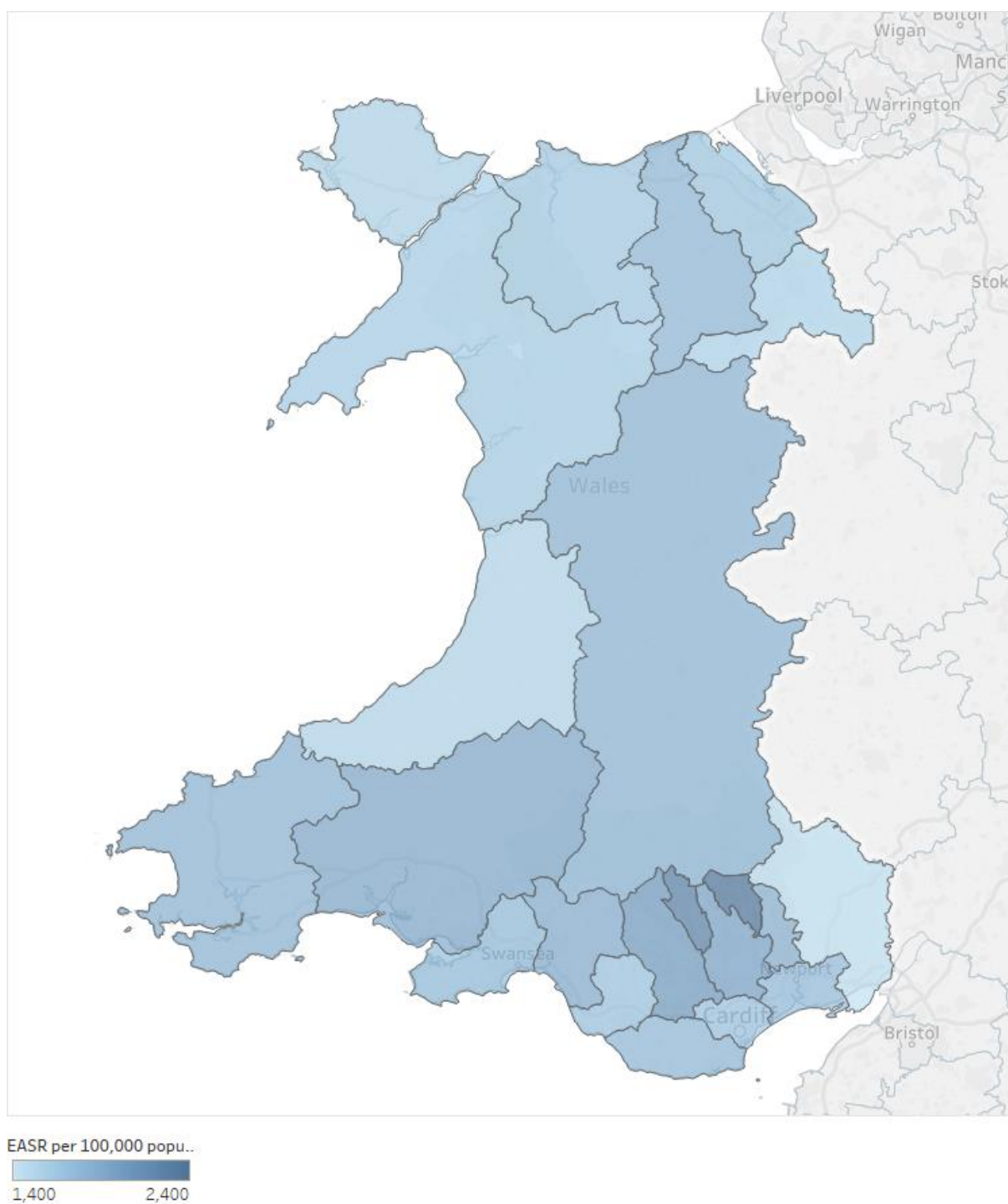
Table 3 and Figure 2 present EASR per 100,000 for alcohol-attributable admissions (episode-based, broad measure) in 2017-18. As with alcohol-specific admission, Blaenau Gwent was the Local Authority Area with the highest directly standardised rate of alcohol-attributable admissions (broad measure, episode based) at 1,490 person-based admissions per 100,000 population, 1.5 times the

rates recorded in the Isle of Anglesey (971 admissions) with the lowest recorded rate. The largest proportionate rate increase was recorded in Blaenau Gwent, which recorded a 4 per cent increase over the last year and a 12 per cent increase over the past five years.

Table 3: European Age Standardised Rate per 100,000 population for alcohol-attributable hospital admission amongst for individuals resident in Wales, episode based, broad measure, 2017-18, by Local Authority area.

Health Board area	Local Authority area	EASR per 100,000 population 2017-18	Change since 2016-17	Change since 2013-14
Abertawe Bro Morgannwg	Bridgend	1146.0	-1%	1%
	Neath Port Talbot	1211.2	3%	5%
	Swansea	1163.7	2%	4%
Aneurin Bevan	Blaenau Gwent	1489.7	4%	12%
	Caerphilly	1299.5	-2%	-3%
	Monmouthshire	970.8	0%	1%
	Newport	1175.2	-8%	-12%
	Torfaen	1213.9	-4%	-4%
Betsi Cadwaladr	Conwy	1017.1	-3%	-10%
	Denbighshire	1151.6	-1%	-4%
	Flintshire	1069.5	0%	-10%
	Gwynedd	976.3	-7%	-11%
	Isle of Anglesey	970.9	-7%	-15%
	Wrexham	1037.6	-6%	-16%
Cardiff and Vale	Cardiff	1151.8	1%	5%
	Vale of Glamorgan	1157.8	0%	6%
Cwm Taf	Merthyr Tydfil	1397.1	-1%	4%
	Rhondda Cynon Taf	1295.5	2%	5%
Hywel Dda	Cardmarthenshire	1168.6	-9%	5%
	Ceredigion	995.8	-8%	1%
	Pembrokeshire	1078.1	-7%	-10%
Powys	Powys	1079.9	1%	10%
Wales	Wales	1146.0	-1%	1%

Source: Substance Misuse Programme / NHS Wales Informatics Service, 2018



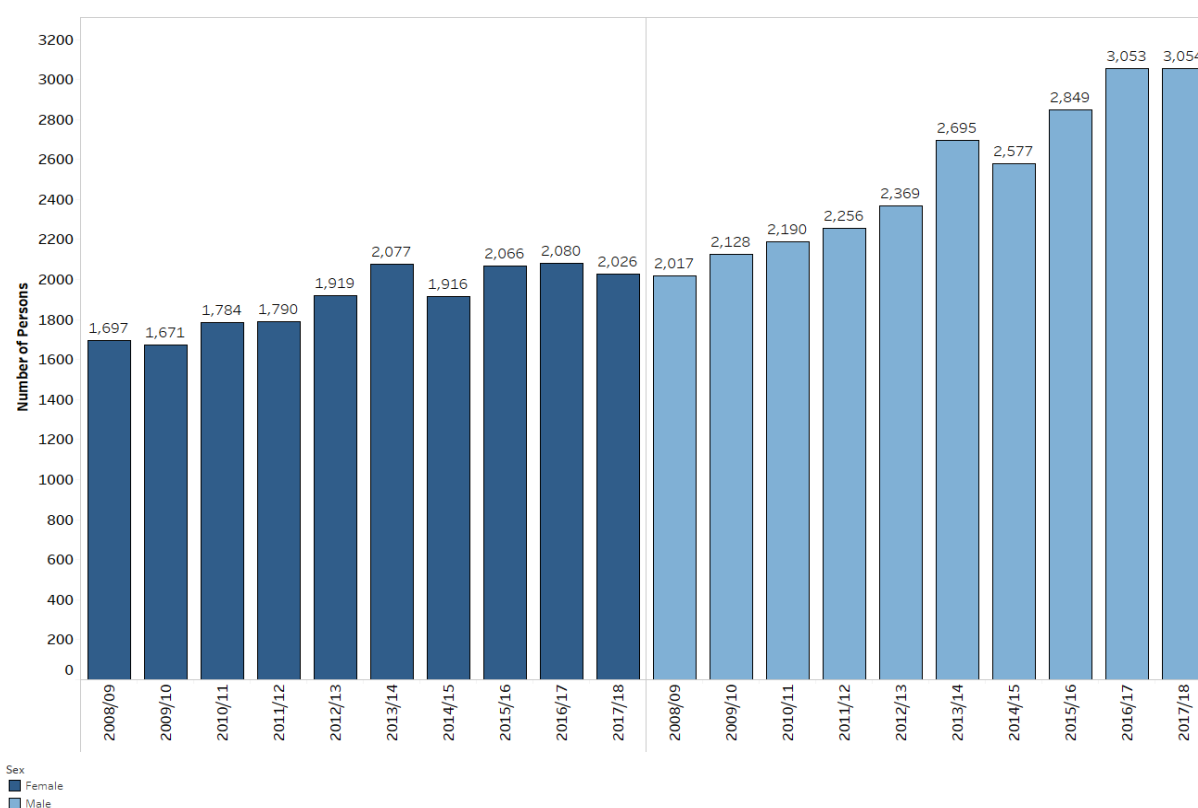
Source: Substance Misuse Programme / NHS Wales Informatics Service, 2018

Figure 2: Alcohol-attributable hospital admissions, individuals resident in Wales, episode based, broad measure, 2017-18, by Local Authority area, European Age Standardised Rate

5. Hospital admissions involving use of illicit drugs

5.1 Hospital admissions for poisonings with illicit drugs

The overall number of hospital admissions for poisonings with named illicit drugs has decreased by 2.4 per cent from 6,669 in 2016-17 to 6,506 in 2017-18. However, compared to 2013-14, there has been a 7.2 per cent increase in illicit drug admissions. The number of unique individuals admitted for illicit drugs was 5080, with males accounting for 60.1 per cent. The trend in increasing hospital admissions over the last five years differs between males and females. The number of males admitted has increased by 13.3 percent whilst the number of females has decreased by 2.5 per cent. The number of individuals admitted to hospital for illicit drugs over the last ten years is shown in Chart 3.

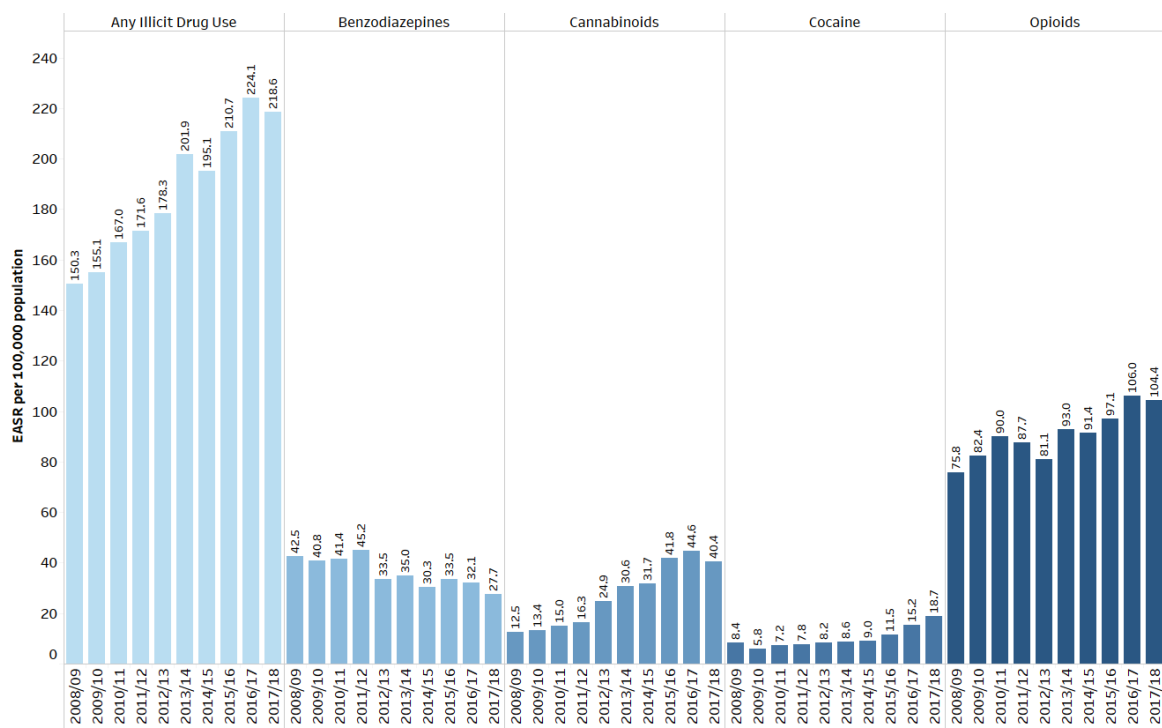


Source: Substance Misuse Programme / NHS Wales Informatics Service, 2018

Chart 3: Individuals resident in Wales admitted to hospital with a condition related to illicit drugs, by year and sex 2008-9 to 2017-18

5.2 Hospital admissions for poisonings by substance type

As shown in Chart 4, overall the EASR per 100,000 population for hospital admissions related to illicit drugs has risen over the past five years to 218.6 admissions per 100,000 population. However, observed trends differed between substance groups. EASR per 100,000 admissions have decreased year on year for benzodiazepines, and for cocaine increases have been recorded year on year for the same period, albeit with lower overall rates.



Source: Substance Misuse Programme / NHS Wales Informatics Service, 2018

Chart 4: Hospital admissions related to illicit drugs, Welsh residents, European Age Standardised Rate per 100,000, by drug type 2008-09 to 2017-18

5.2.1 Opioids

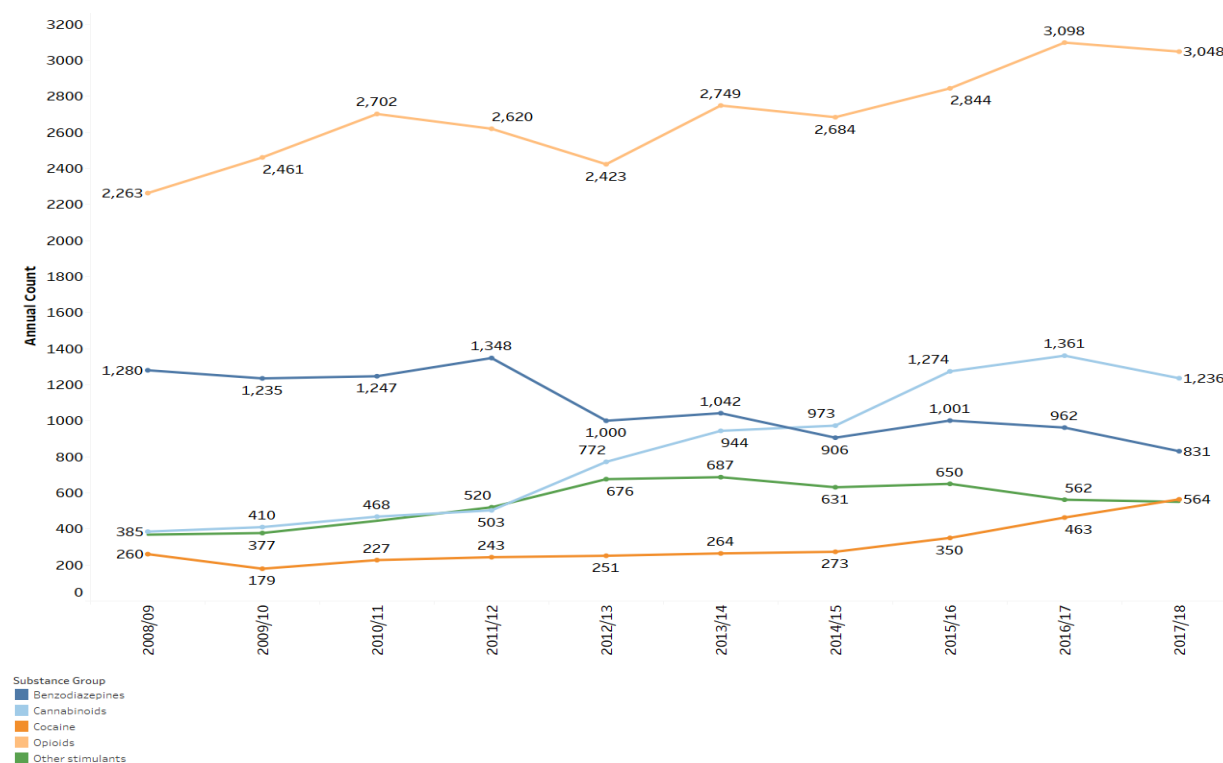
Opioids remain the substance group related to the highest number of admissions with 3,048 opioid related admissions in 2017-18, a decrease of 1.61 per cent on the previous year but an increase of 10.9 per cent from 2013-14. There were a total of 2,399 individuals admitted for opioids in 2017-18, consistent with the previous year. The EASR for opioid related admissions in 2017-18 was 104 admissions per 100,000 population, an increase of 12.2 percent over the last 5 years.

5.2.2 Cannabinoids

Cannabinoids are the second highest substance group with 1,236 admissions in 2017-18 relating to 1,060 individuals. There was a decrease of 9.1 per cent in the number of admissions compared to the previous year (1,361 admissions in 2016-17), however, admissions relating to cannabinoids have risen by 61.4 per cent over the last five-year period. The EASR for cannabinoid admissions was 40 per 100,000 population.

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 'skunk,' or newer forms of synthetic cannabinoid receptor agonists (SCRAs), sometimes referred to 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 homeless or incarcerated.² In addition, the EMCDDA have reported increases in the potency of both the resin and herb forms of cannabis over the last 10 years.³



Source: Substance Misuse Programme / NHS Wales Informatics Service, 2018

Chart 5: Hospital admissions for poisonings with named illicit drugs, Wales 2008-09 to 2017-18

5.2.3 Cocaine

The largest increases in admissions have involved cocaine. In 2017-18 there were 564 cocaine related admissions involving 497 individuals. The number of admissions for cocaine has increased by 113.6 percent over 5 years, from 264 in 2013-14. In this time, the EASR has also increased from nine to 19 admissions per 100,000 population. This is considered to be as 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.^{3,4}

5.2.4 Benzodiazepines

In 2017-18 there were 831 benzodiazepine related admissions involving 716 individuals. The EASR was 28 admissions per 100,000 population. Over the last 5 years, there has been a 20.2 per cent decrease in the number of admissions for benzodiazepines.

² WEDINOS (2015) Philtre annual report, 2014-15. Public Health Wales. Available at:

<http://www.wedinos.org/newsletter.html>

³ EMCDDA 2018 : European Drug Report – Trends and developments 2018. Available at

http://www.emcdda.europa.eu/emcdda-home-page_en

⁴ See page 68

5.2.5 Other stimulants

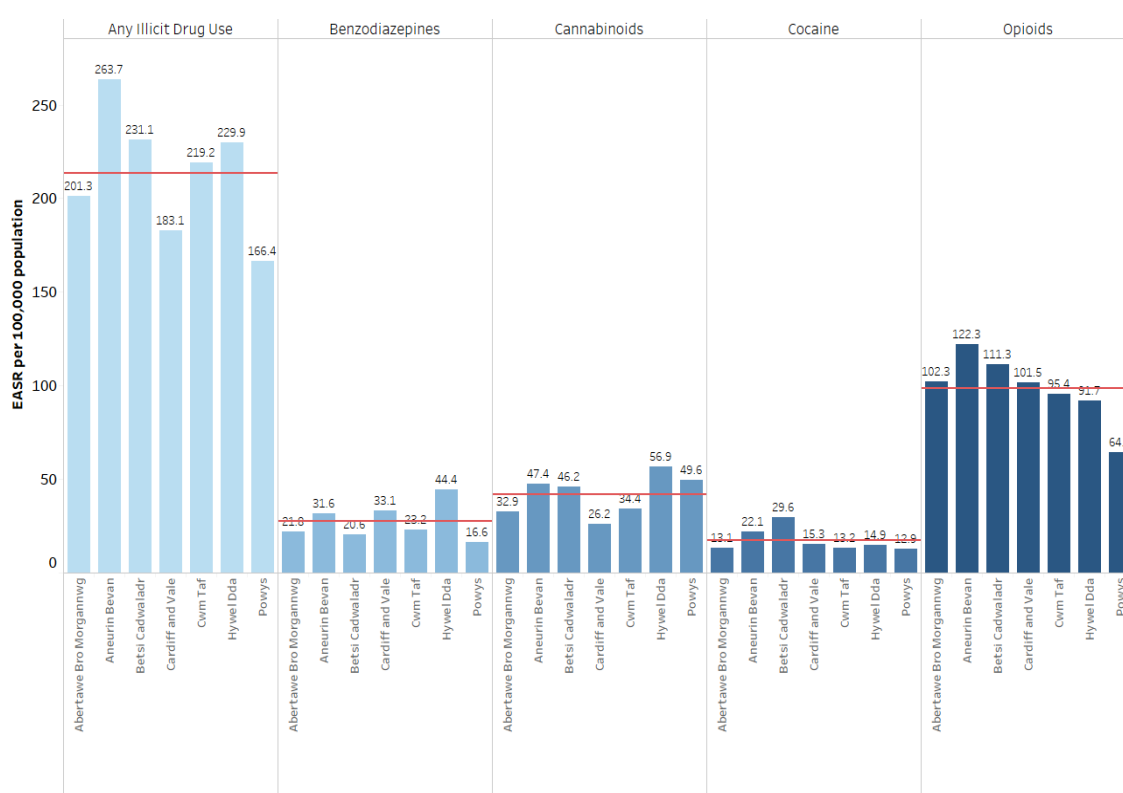
The number of admissions relating to the category 'other stimulants' have remained consistent with the previous year although there has been a decrease of 19.9 per cent compared to 5 years ago.

5.2.6 Multiple drug use

In 2017, there were 788 admissions where multiple drugs were recorded, accounting for 12.1 percent of all admissions for illicit drugs. The number of admissions in which multiple drugs were recorded has increased by 17.6 per cent over the last 5 years.

5.3 Illicit drug related hospital admissions by local authority area of residence in Wales

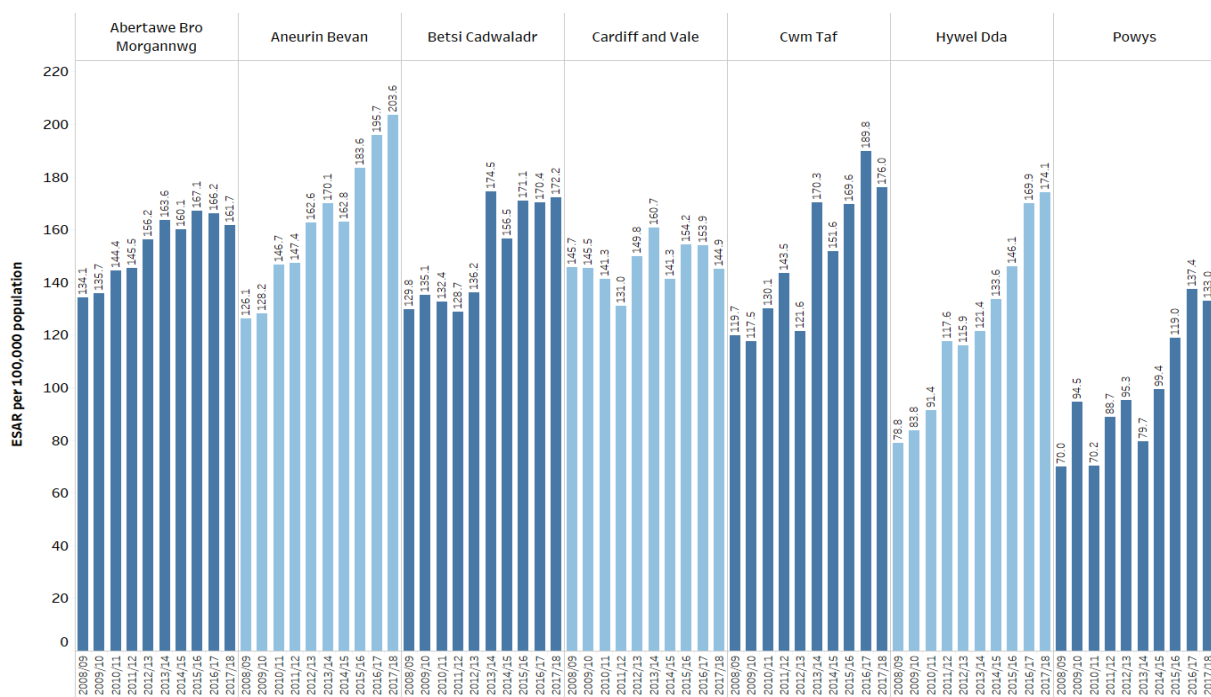
As with hospital admissions related to alcohol, there was geographic variation in illicit drug related admissions. As shown in Chart 6, Aneurin Bevan Health Board (ABUHB) area has the highest EASR of admissions related to illicit drugs (263.7 per 100,000 population) with Cwm Taf, Hywel Dda and Betsi Cadwaladr Health Board areas all above the Wales average in 2017-18.



Source: Substance Misuse Programme / NHS Wales Informatics Service, 2018

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 2017-18

Chart 7 shows the rate of hospital admissions for illicit drugs by health board over the last ten years. As indicated, substantial increases have been recorded for each health board area with the exception of ABMU and Cardiff and Vale Health Boards which show a more stable pattern.



Source: Substance Misuse Programme / NHS Wales Informatics Service, 2018

Chart 7: Hospital admissions related to illicit drugs, Welsh residents, European Age Standardised Rate per 100,000 population, by year and Health Board area., 2008-09 to 2017-18.

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 which 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 increased in 2017-18 for both alcohol and illicit drug related admissions.

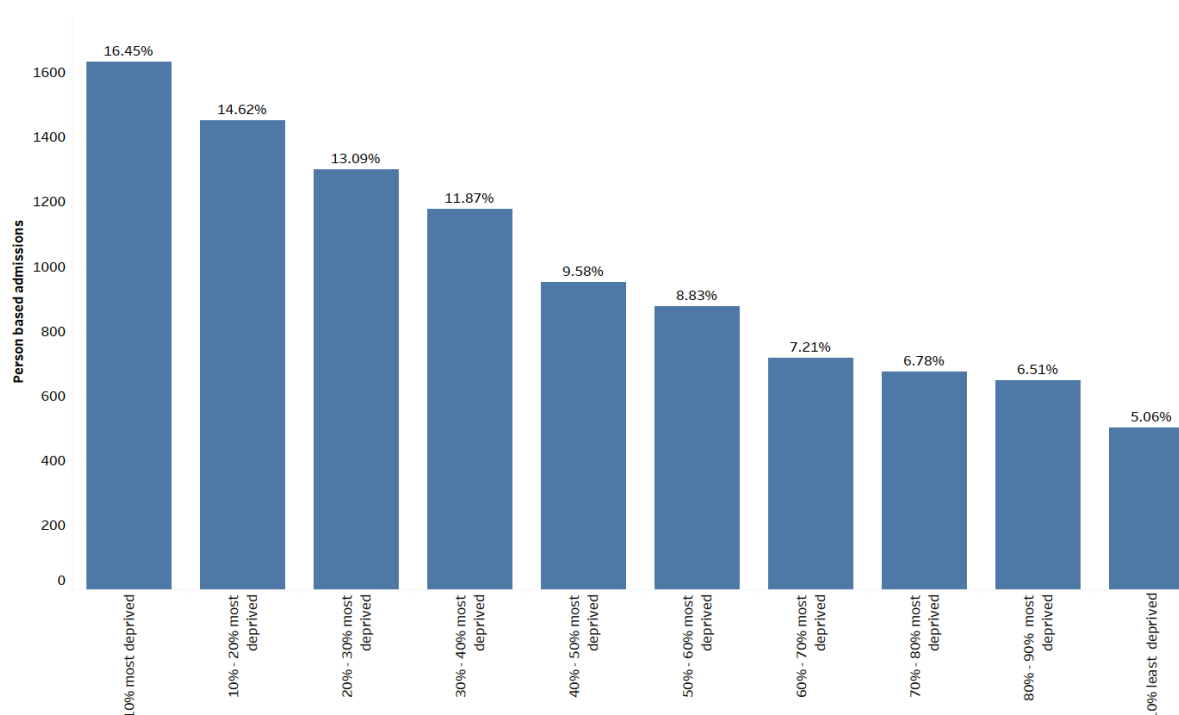
Table 4: Admission to psychiatric hospital and contact with psychiatric specialism (any hospital) related to substance misuse, numbers and proportion (%) of all admissions

	2013-14	2014-15	2015-16	2016-17	2017-18
Alcohol-specific admissions (any position)	518 (5.1%)	457 (4.5%)	420 (4.2%)	438 (4.3%)	466 (4.7%)
Illicit drug admissions (any position)	545 (11.4%)	525 (11.7%)	513 (10.4%)	512 (10.0%)	572 (11.2%)

Source: Substance Misuse Programme / NHS Wales Informatics Service, 2018

7. Substance misuse and deprivation

There is considerable evidence of a linear relationship between substance misuse and deprivation⁵. The Welsh Government produces an index of multiple deprivation⁶ which ranks every lower super output area (LSOA, small geographical areas with stable populations of about 1,500) on measures of deprivation. 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. Hospital admission data includes details on these deciles. Note that deprivation is a measure of the area in which an individual lives, rather than an evaluation of their particular circumstances. Chart 8 and Chart 9 show the percentages of all patients resident in Wales and admitted to hospital with alcohol-specific and illicit drug related conditions respectively by each deprivation decile.

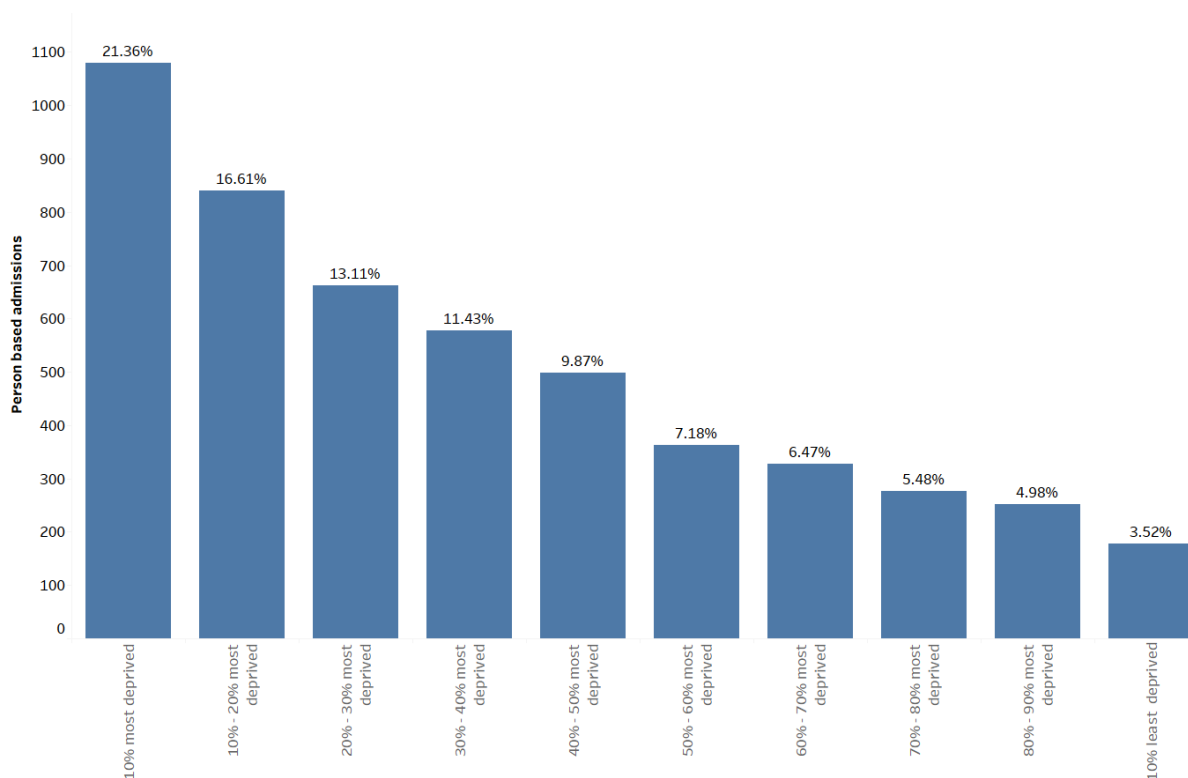


Source: Substance Misuse Programme / NHS Wales Informatics Service, 2018

Chart 8: Percentage of all individuals resident in Wales admitted to hospital with an alcohol-specific condition in any position by deprivation decile, 2017-18

⁵ Local Government Association (2013) Tackling drugs and alcohol, local government's new public health role. http://www.local.gov.uk/c/document_library/get_file?uuid=29b1bd72-bac4-46dd-9189-73ea23c38284&groupId=10180

⁶ Welsh Index of Multiple Deprivation (WIMD), <http://gov.wales/statistics-and-research/welsh-index-multiple-deprivation/?lang=en>



Source: Substance Misuse Programme / NHS Wales Informatics Service, 2018

Chart 9: Percentage of all individuals resident in Wales admitted to hospital with a condition related to illicit drugs in any position by deprivation decile, 2017-18

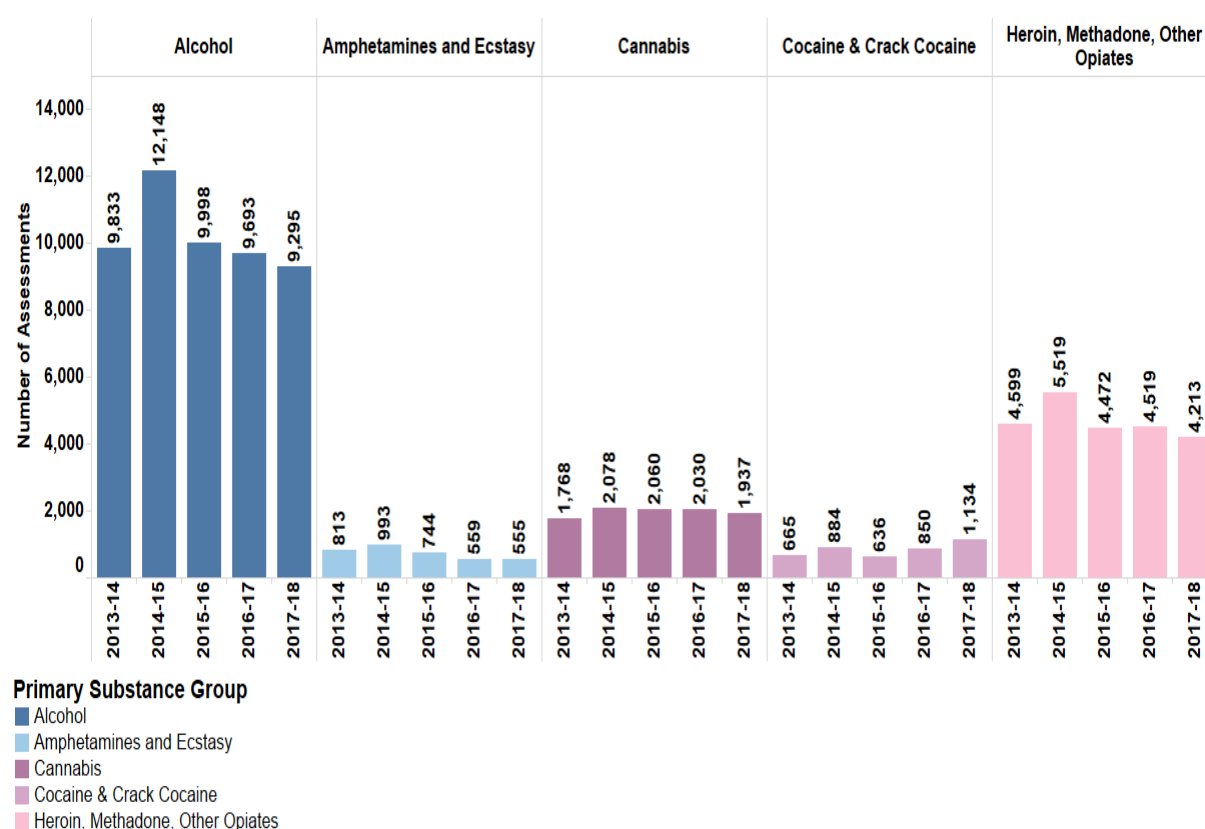
The two charts above show a clear linear relationship between level of deprivation and patients resident in Wales admitted to hospital in relation to alcohol or illicit drugs in 2017-18. The proportion of all patients admitted for alcohol-specific conditions who lived in the 10 per cent of most deprived areas was 3.3 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 6.1 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 17,776 assessments within substance misuse services in Wales in 2017-18,⁷ representing a decrease of 3.5 per cent compared to the previous year (18,428 assessments). This year is the third consecutive year in which the number of assessments have decreased from a peak of 22,691 in 2014-15. These assessments were attended by 16,010 unique individuals, a drop of 3.2 per cent from 16,546 in the previous year. Of these individuals:

- 8,284 (51.7 per cent) were primary problematic alcohol clients, of which 62.5 per cent (n=5,180) were male.
- 7,664 (47.9 per cent) were primary problematic drug clients of which 70.3 per cent (n=5,386) were male.
- 62 (0.3 per cent) did not have a substance recorded.



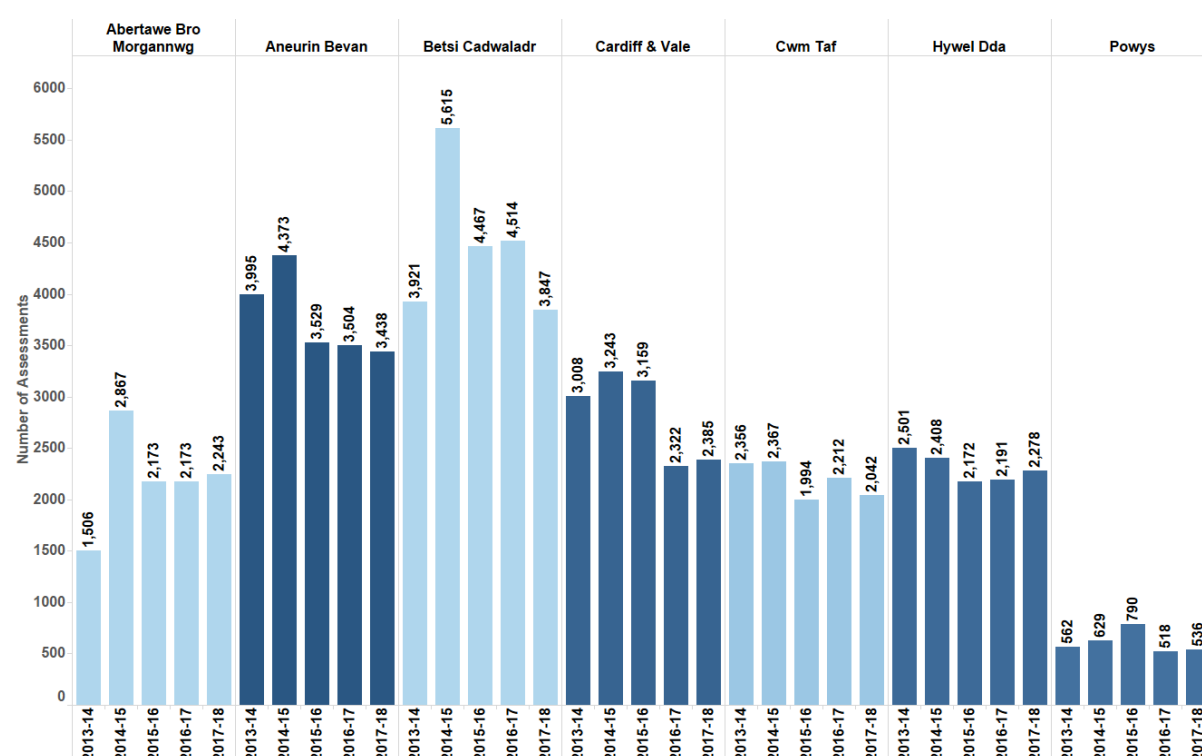
Source: Welsh National Database for Substance Misuse, 2018

Chart 10: Substance misuse assessments in Wales, by year and primary substance of use reported 2013-14 to 2017-18

⁷ Data sourced from personal communication with Lead author of the Welsh National Database for Substance misuse Treatment report, NWIS 2018 alongside data from the Welsh Government Treatment Data - Substance Misuse in Wales 2017-18, available at: <https://gov.wales/topics/people-and-communities/communities/safety/substancemisuse/impact/stats/?lang=en>

Amongst assessment for problematic drug use, opioids, principally heroin, were cited as the most prevalent primary substance with 4,213 assessments (23.7 per cent), representing a decrease of 306 (6.8 per cent) on the previous year (4,519 assessments). Cannabis was the next most frequently reported substance with 1,937 assessments (10.9 per cent) down from 2,030 assessments the previous year, a decrease of 97 (4.6 per cent). The number of assessments where the primary substance was identified as cocaine has increased from 665 in 2013-14 to 1,134 in 2017-18. This is an increase of 70.5 per cent and represents 6.4 per cent of all referrals to substance misuse services.

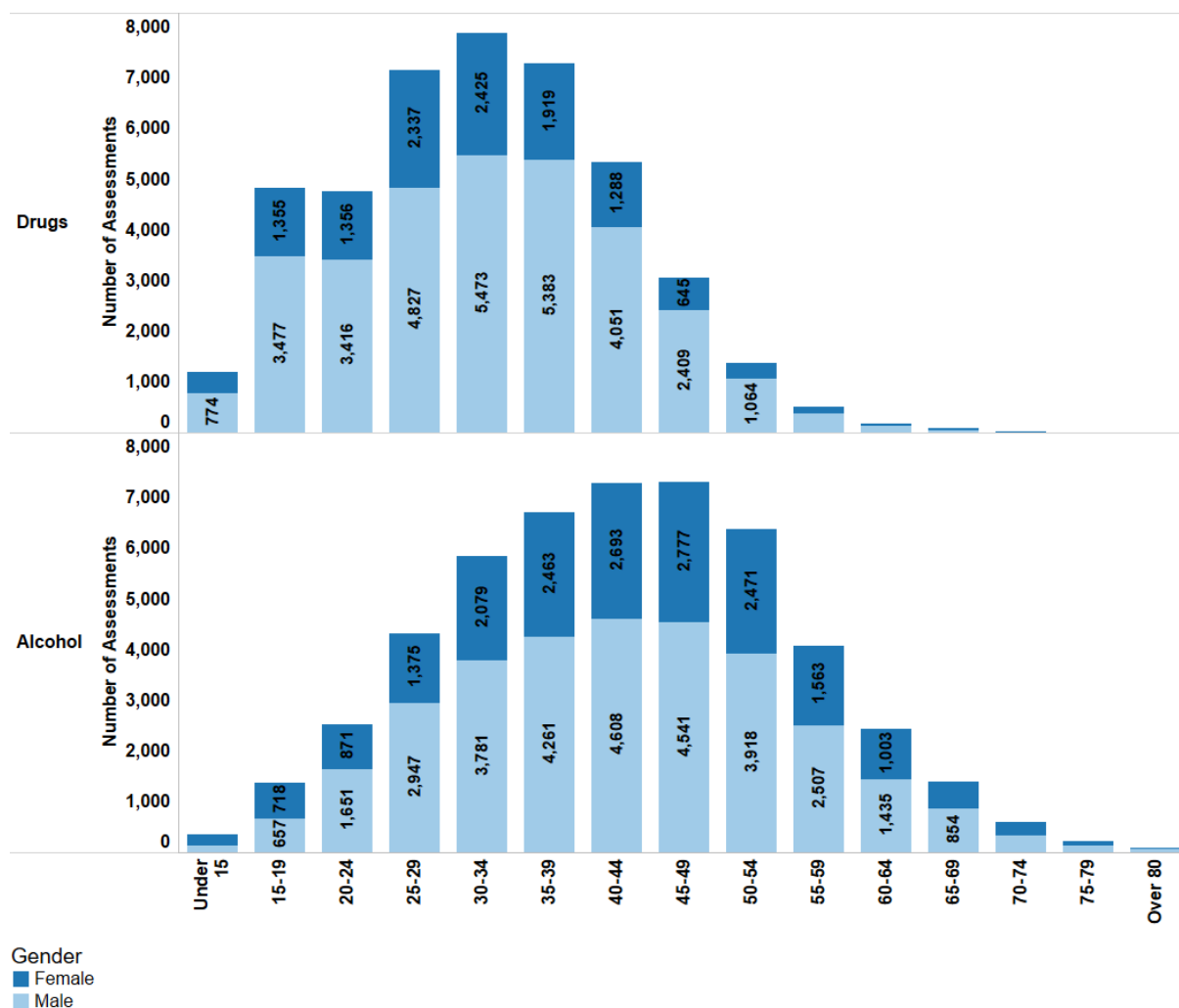
Changes in the number of substance misuse assessments over the last five years by health board area is shown in Chart 11. The number of assessments has remained relatively stable over the last year in most health board areas with the exception of a reported decrease of 14.8 per cent in assessments in Betsi Cadwaladr University Health Board and a decrease of 7.7 per cent in Cwm Taf University Health Board. Assessments in all health boards have decreased compared to 2014-15.



Source: Welsh National Database for Substance Misuse, 2018

Chart 11: Substance misuse assessments carried out by services in Wales, by Health Board 2013-14 to 2017-18

Substance misuse assessments for 2017-18 for age bands and sex are shown in Chart 12. As is clear from the chart, amongst females a comparable number of assessments are undertaken for illicit drugs in the 15-19 and 20-24 year age groups, increasing amongst those aged 25-39 and then dropping off in each of the subsequent older age bands 40-55 years. Amongst males, the numbers are not only higher, but the range is greater, with comparable rates again at 15-19 and 20-24 but remaining elevated for the age bands 25-29 through to 40-44 years before declining to pre-teen levels. The drug profile for assessments within specialist substance misuse services differs considerably with age as shown in subsequent chapters.

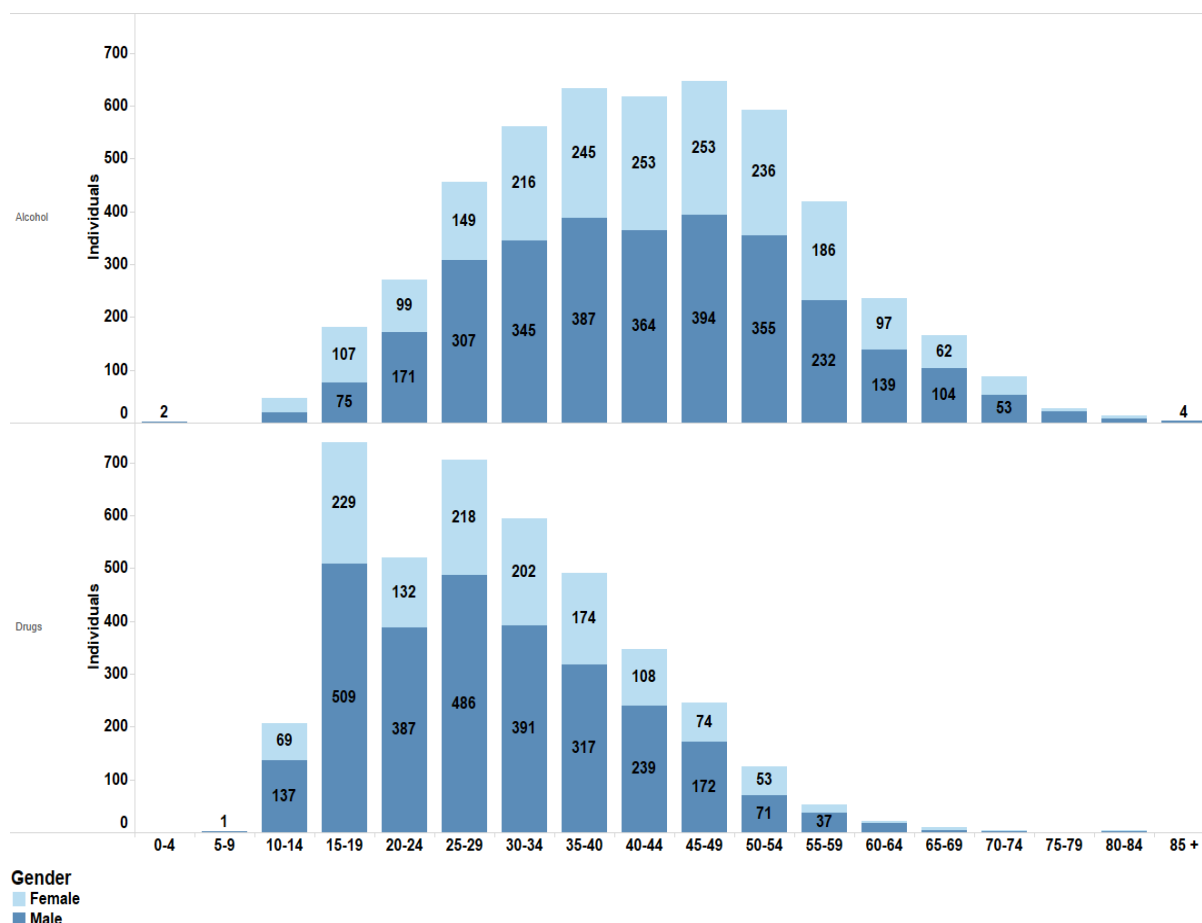


Source: Welsh National Database for Substance Misuse, 2018

Chart 12: Number of individuals assessed by substance misuse services in Wales in 2017-18 by primary substance reported (alcohol or drugs) and by five-year age bands.

8.2 Individuals new to specialist substance misuse services

There were 9,060 individuals assessed in 2017-18 who had not previously been recorded as having an assessment with a substance misuse service in Wales, representing 51.0 per cent of all individuals assessed in that year. Amongst those new to services, there were 4,958 assessments for primary problematic alcohol use and 4,059 assessments for primary problematic drug use. The remaining 43 did not have a substance recorded. Assessments for those new to services are shown in Chart 13 by primary problematic substance type.



Source: Welsh National Database for Substance Misuse, 2018

Chart 13: Number of individuals new to service, assessed by substance misuse services in Wales in 2017-18 by primary substance reported (alcohol or drugs) and five-year age bands.

The proportion of individuals assessed in 2017-18 who were new to services varied by primary problematic substance. Amongst primary problematic drug service users, just over 50 per cent (53.4%) of those new to services were aged up to 29 years, assessments reduced in all subsequent age groups. However, amongst primary problematic alcohol services users a different pattern emerges with assessments amongst those new to services more dispersed across the age groups. Just over half, 54.8 per cent, of assessments occurred in those aged up to 44 years, with numbers of assessments remaining elevated up to the 55-59 year age group and a gradual reduction observed thereafter.

The proportion of men and women who were new to services again varied across the primary problematic substance groups: for alcohol assessments 60.2 per cent (n=2,982) were male; for drug assessments 68.3 per cent were male (n=2771).

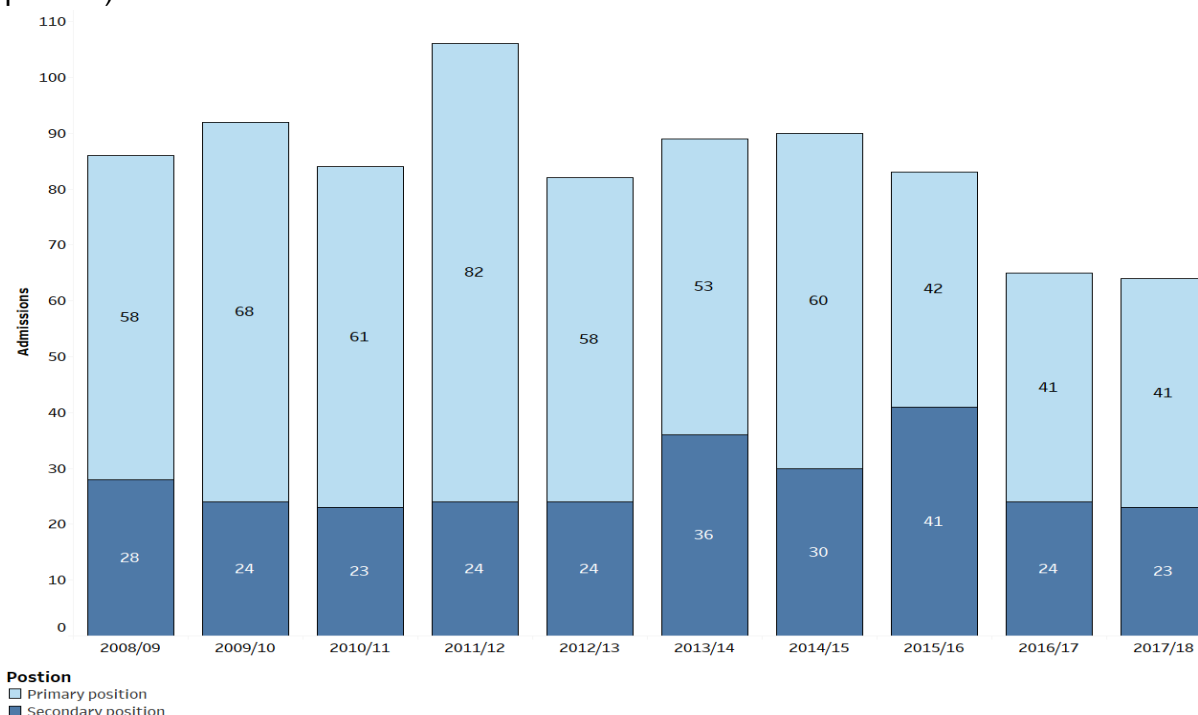
9. Pre and post-natal health

9.1 Conditions originating in the perinatal period: Foetal alcohol syndrome

Foetal alcohol syndrome (FAS) arises from maternal use of alcohol during pregnancy.⁸ It is a serious condition that typically results in affected children experiencing restricted growth, learning and behavioural disorders and physiological problems. There were 11 hospital admissions of Welsh residents under the age of 20 in 2017-18 in which a diagnosis of FAS was recorded in any diagnostic position, up from 5 in the previous year.

9.2 Foetuses and new-borns affected by maternal use of or withdrawal from drugs of addiction

Hospital admissions for foetuses and neonates affected by maternal use, or withdrawal from, alcohol or other drugs of addiction have declined over recent years (see Appendix A for detailed definition). In 2017-18 there were 64 admissions of Welsh residents in which these conditions were recorded in any diagnostic position, with a relevant condition recorded in the primary position in 41 cases (64.0 per cent). The number of admissions for these conditions was the lowest since 2008-09.



Source: Substance Misuse Programme / NHS Wales Informatics Service, 2018

Chart I4: Number of hospital admissions for foetuses and neonates affected by maternal use, or withdrawal from, alcohol or other drugs of addiction, by diagnostic position 2008/9 to 2017/18.

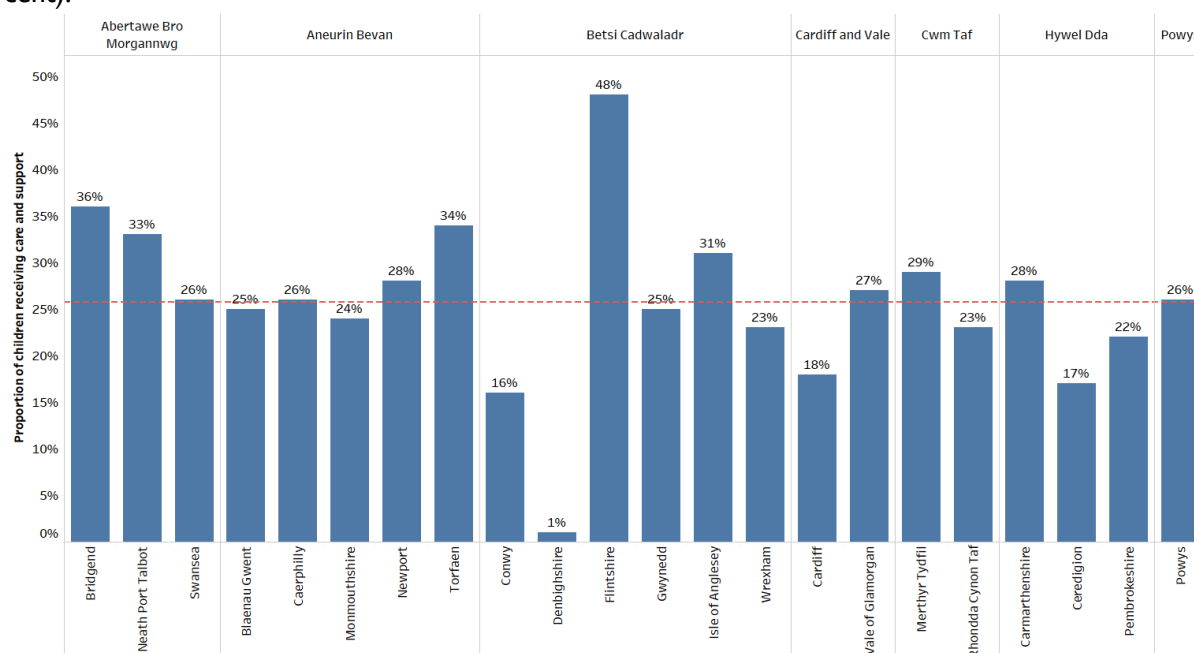
⁸ Further information on Foetal Alcohol Syndrome and related conditions is available at: <http://www.nhs.uk/Conditions/foetal-alcohol-syndrome/Pages/Introduction.aspx>

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, there have been a number of changes to the way needs are assessed. As a result, the 2017 Children in Need Census has been changed to the 'Children Receiving Care and Support' Census. The 2017 report has advised that comparison to previous years should be avoided.⁹

In 2017 there were 15,930 children receiving care and support in Wales.^{10,11,12} Of these, there were 4,035 children, 25.3 per cent, with parental substance misuse listed as a factor in their referral.¹³ 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 (25 per cent) shown as a red line. For children receiving care and support with parental substance misuse issues, the local authorities with the greatest number of cases were Rhondda Cynon Taf with 475 cases, followed by Swansea with 355 cases. Proportionally, Flintshire has the highest proportion of children receiving care and support with parental substance misuse indicated as a factor (48 per cent).



Source: Welsh Government, 2018

Chart 15: Children receiving care and support in Wales, percentage with parental substance misuse problems by local authority, 31 March 2017.

⁹ Welsh Government 2018: Wales Children Receiving Care and Support Census, 2017. Found at : <https://gov.wales/docs/statistics/2018/180319-wales-children-receiving-care-support-census-2017-en.pdf>

¹⁰ 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.

¹¹ 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.

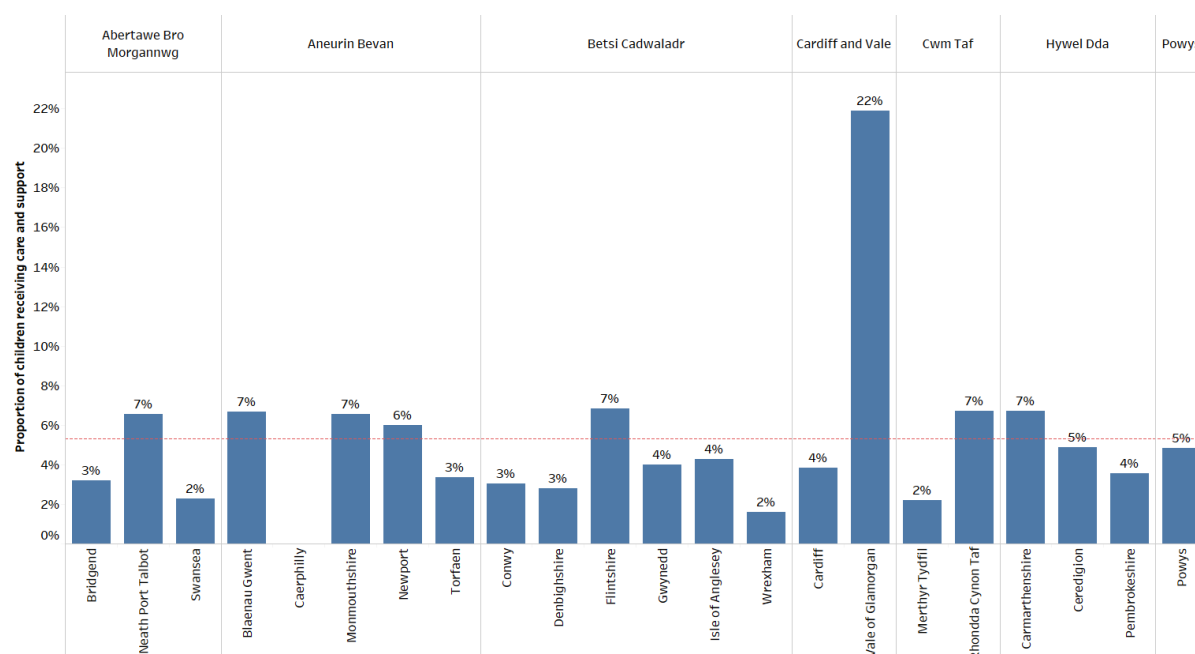
¹² Note that the methodology for producing these data has changed and therefore the figures in this report may not match those presented in previous reports

¹³ There were 85 cases where no information was provided for parental substance or alcohol misuse.

As at 31 March 2017, there were 615 children receiving care and support where their own substance misuse was identified as a problem, 4 per cent of all children receiving care and support. The percentage of children receiving care and support with substance misuse problems is shown by local authority in Chart 16.

Rhondda Cynon Taff local authority area reported the largest number of cases, (n=130) of children receiving care and support with substance misuse problems. The highest proportion was reported in the Vale of Glamorgan at 22 per cent. Data was not available for Caerphilly local authority.

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, 2018

Chart 16: Children Receiving Care and Support in Wales, percentage with a substance misuse problem by local authority, 31 March 2017.¹⁴

10.2 School exclusions due to substance misuse

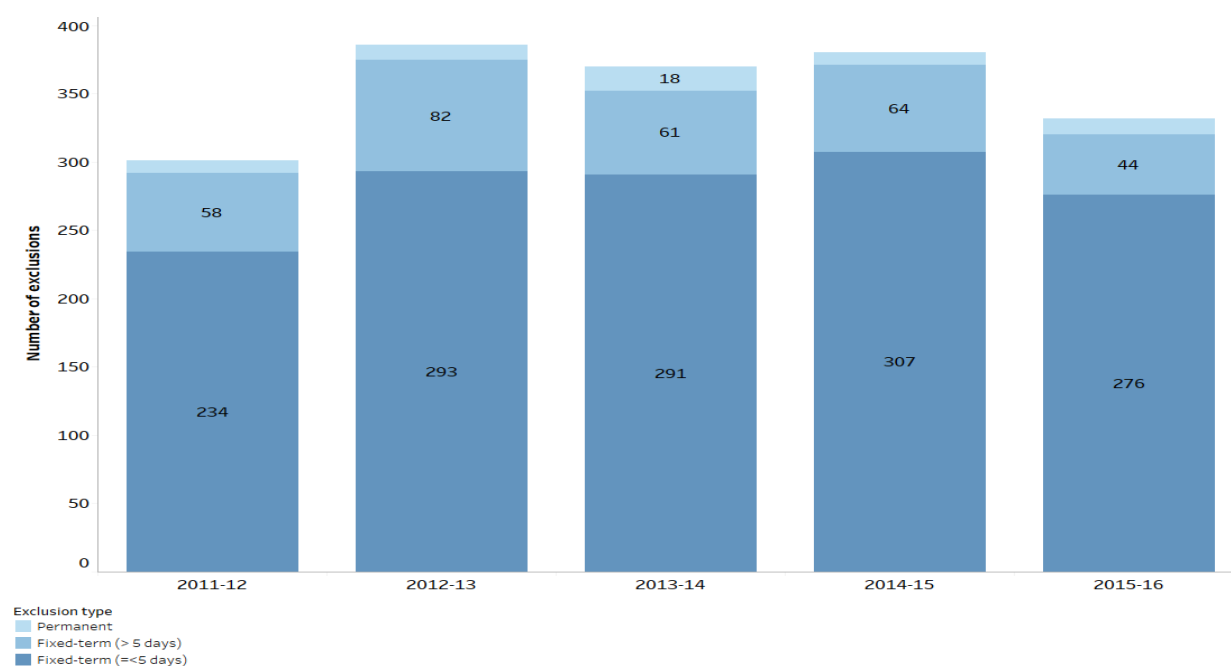
In 2015-16, the most recent year for which statistics are available, the number of school exclusions related to drugs or alcohol decreased overall from 380 to 332 (12.6 per cent) as shown in Chart 17 by type of exclusion; fixed term or permanent.¹⁵

The number of permanent pupil exclusions due to drugs or alcohol increased from 9 to 12 cases, whilst the number of fixed term exclusions under and over 5 days decreased by 10.1 and 31.3 per

¹⁴ Data for Caerphilly was not available for the 2017 census.

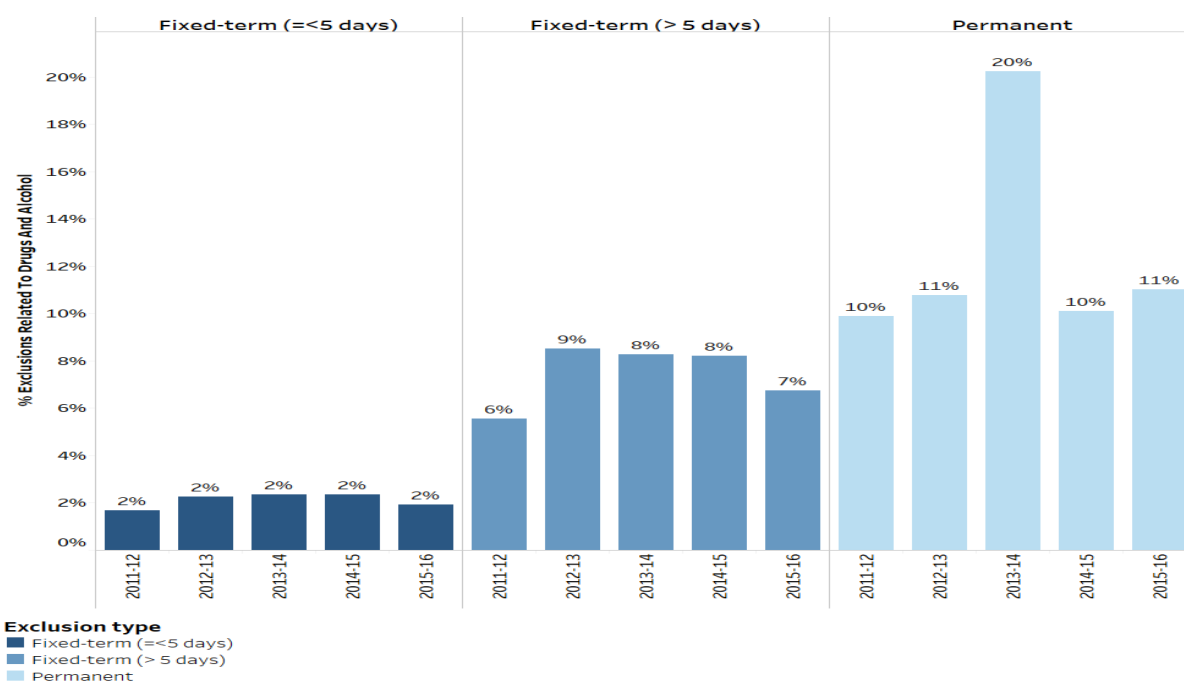
¹⁵ Note that the methodology for producing these data has changed and therefore the figures in this report may not match those presented in previous reports <http://gov.wales/statistics-and-research/exclusions-schools/?lang=en>

cent respectively. Of all school exclusions, drug and alcohol related exclusions accounted for 2.2 per cent in 2015-16. Figures for the most recent five years are shown in Chart 18.



Source: Welsh Government, 2017

Chart 17: Number of school exclusions related to drugs and alcohol by type of exclusion, 2011-12 to 2015-16.

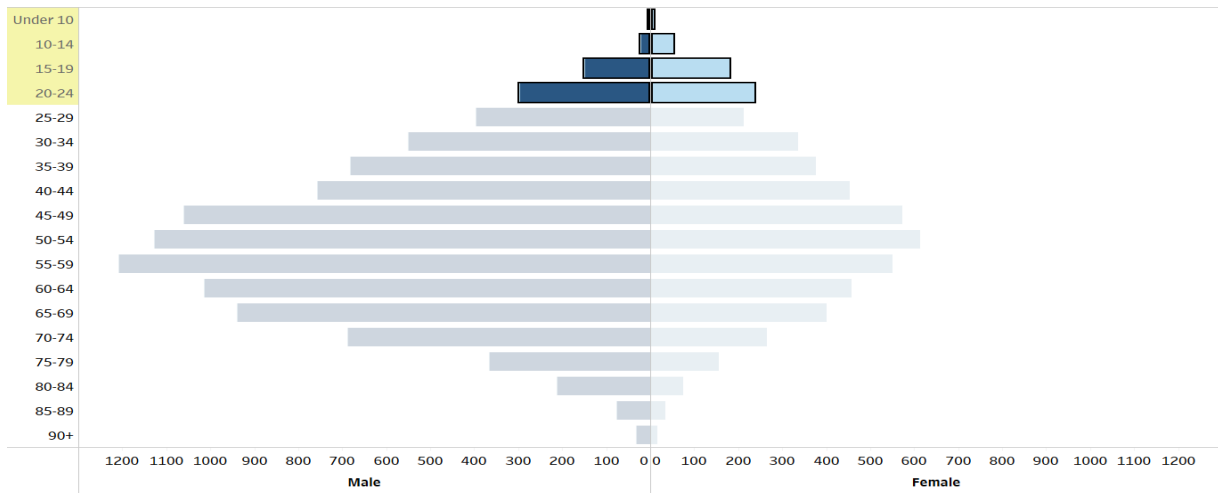


Source: Welsh Government, 2017

Chart 18: Proportion of school exclusions related to drugs and alcohol, by type of exclusion, 2011-12 to 2015-16.

10.3 Hospital admissions related to alcohol amongst children and young people

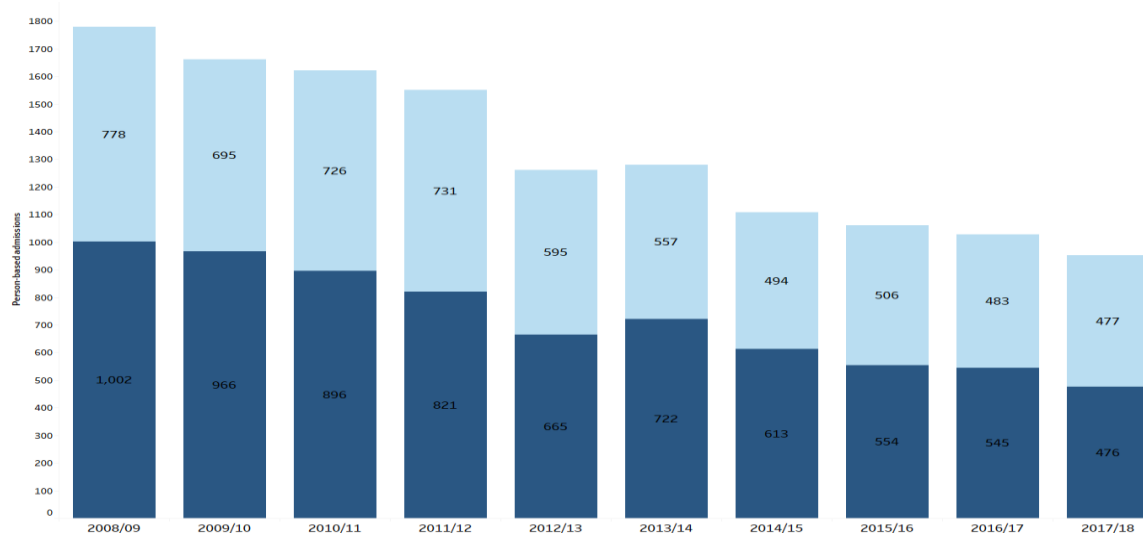
There were 953 admissions involving young people aged under-25 with an alcohol-specific condition in 2017-18, a fall of 7.2 per cent compared with 2016-17. The 953 admissions involved 852 individuals. There were 213 admissions with an alcohol-specific code in the primary position (52.1 per cent male) accounting for 22.4 per cent of all alcohol admissions for under-25s. Chart 19 shows the number of admissions for alcohol-specific conditions amongst under-25s resident in Wales in 2017-18 by sex and age group.



Source: Substance Misuse Programme / NHS Wales Informatics Service, 2018

Chart 19: Hospital admissions for alcohol-specific conditions in Welsh residents aged under 25 years, by sex 2017-18

Chart 20 shows the number of admissions involving young people aged up to 25 with an alcohol-specific condition by year. As indicated, admissions involving this age cohort have been declining both in the last year and over the last ten years, by 7.2 per cent and 25.5 per cent respectively, to 953 in 2017-18. The decrease in admissions over the last 5 years was more pronounced in males (34.1 per cent decrease) compared to females (14.4 per cent). However, 2017-18 was the only year in the last decade where admissions for females were greater than those amongst males in this age cohort. This age cohort accounted for 6.5 per cent of all admissions to hospital with an alcohol-specific condition in 2017-18.

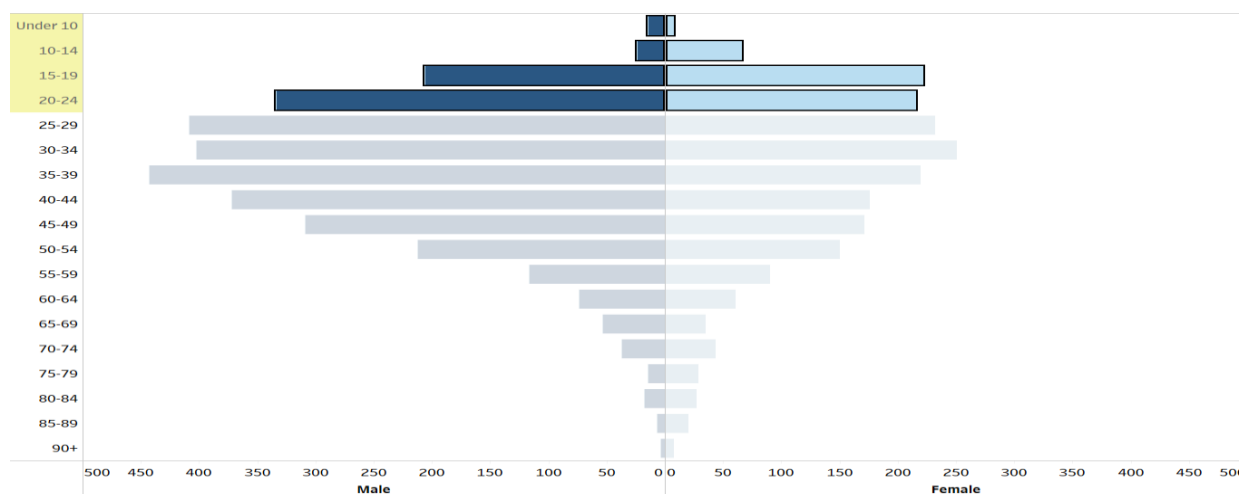


Source: Substance Misuse Programme / NHS Wales Informatics Service, 2018

Chart 20: Admissions involving young people aged under 25 resident in Wales with an alcohol-specific condition, by year and sex 2008-09 to 2017-18. Females in light blue.

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

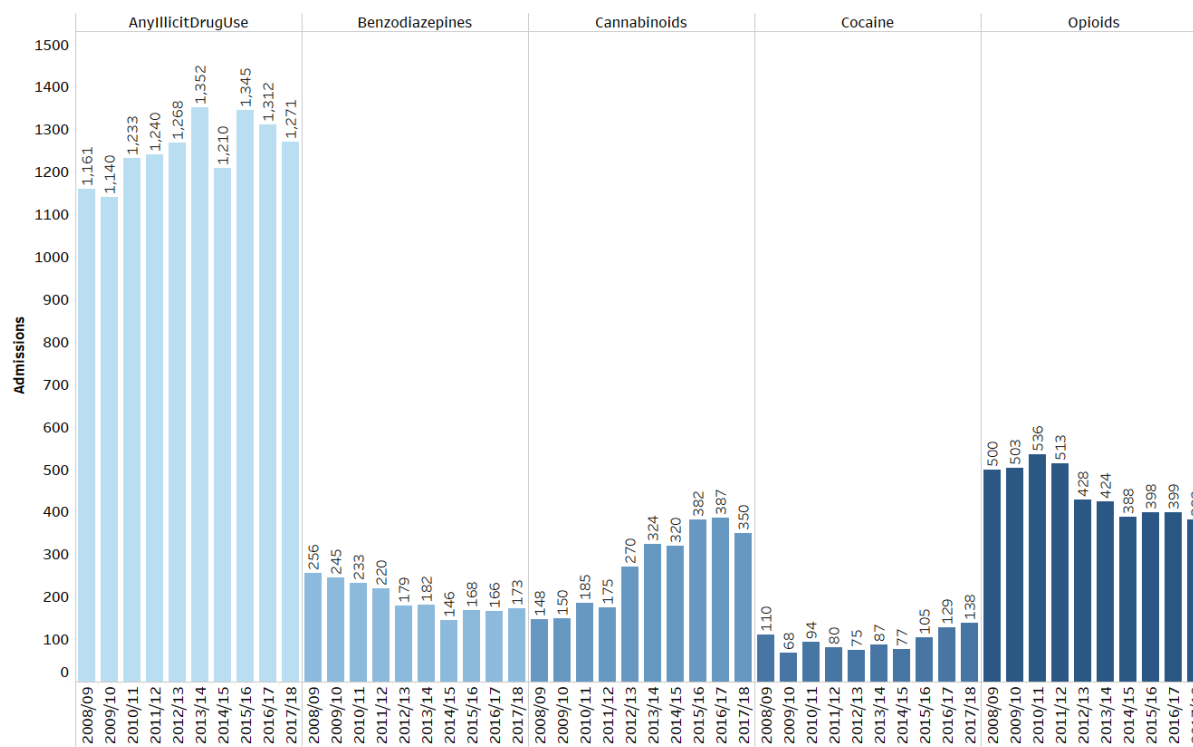
There were 1,271 admissions of young people aged under-25 for conditions related to illicit drugs in 2017-18, a decrease of 3.1 per cent on 2016-17. These admissions involved 1,091 individuals, a decrease of 1.3 per cent on the previous year. Individuals aged up to 24 made up 21.5 per cent of all those admitted to hospital in 2017-18 for illicit drugs. Of these admissions, 53.1 per cent were male and 46.9 per cent were female. The proportion of male admissions in this age cohort has marginally increased by 1.5 percentage points compared to the previous year. Chart 21 shows the number of young people aged under 25 resident in Wales and admitted to hospital following use of illicit drugs in 2017-18.



Source: Substance Misuse Programme / NHS Wales Informatics Service, 2018

Chart 21: Hospital admissions for conditions related to illicit drugs amongst young people aged up to 24, Welsh resident by sex and age group, 2017-18

Chart 22 shows the number of illicit drugs related admissions by substance over the past ten years for those aged under 25. Admissions for opioid use have been steadily decreasing following a sharp decline in 2014-15. The number of admissions for cannabinoids has also dropped. However, admissions for cocaine continue to rise with an increase over the last five years of 58.6 per cent, from 87 to 138 admissions.



Source: Substance Misuse Programme / NHS Wales Informatics Service, 2018

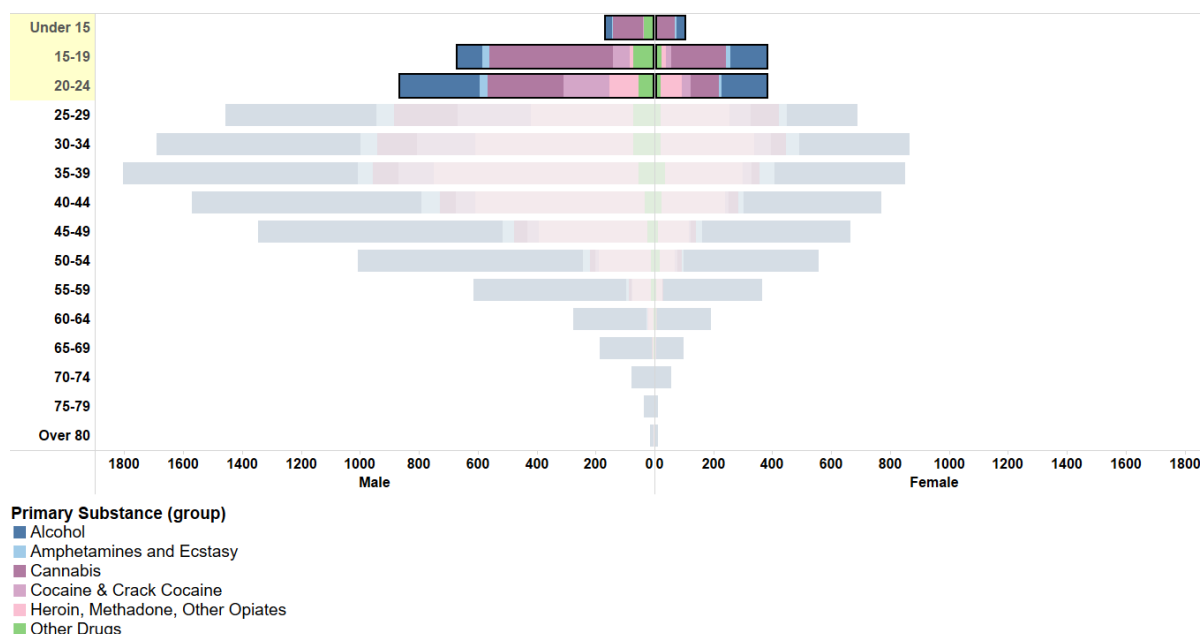
Chart 22: Hospital admissions for illicit drugs involving young people aged under 25 years and resident in Wales, by year and substance type¹⁶

10.5 Assessments in specialist substance misuse treatment services amongst young people

In 2017-18, there were 2,560 assessments of young people aged under 25, a reduction of 6.8 per cent from 2016-17 (2,748 assessments). This is the third consecutive reduction since a peak of 3,738 assessments in 2014-15, a decrease of 31.5 per cent.

Chart 23 shows assessments for this age group by sex, age and primary substance reported as problematic. Young people accounted for 14.4 per cent of all assessments, a marginal decrease from 14.9 per cent the previous year.

¹⁶ Individuals may have been admitted for more than once substance group and would have been included in each relevant group.



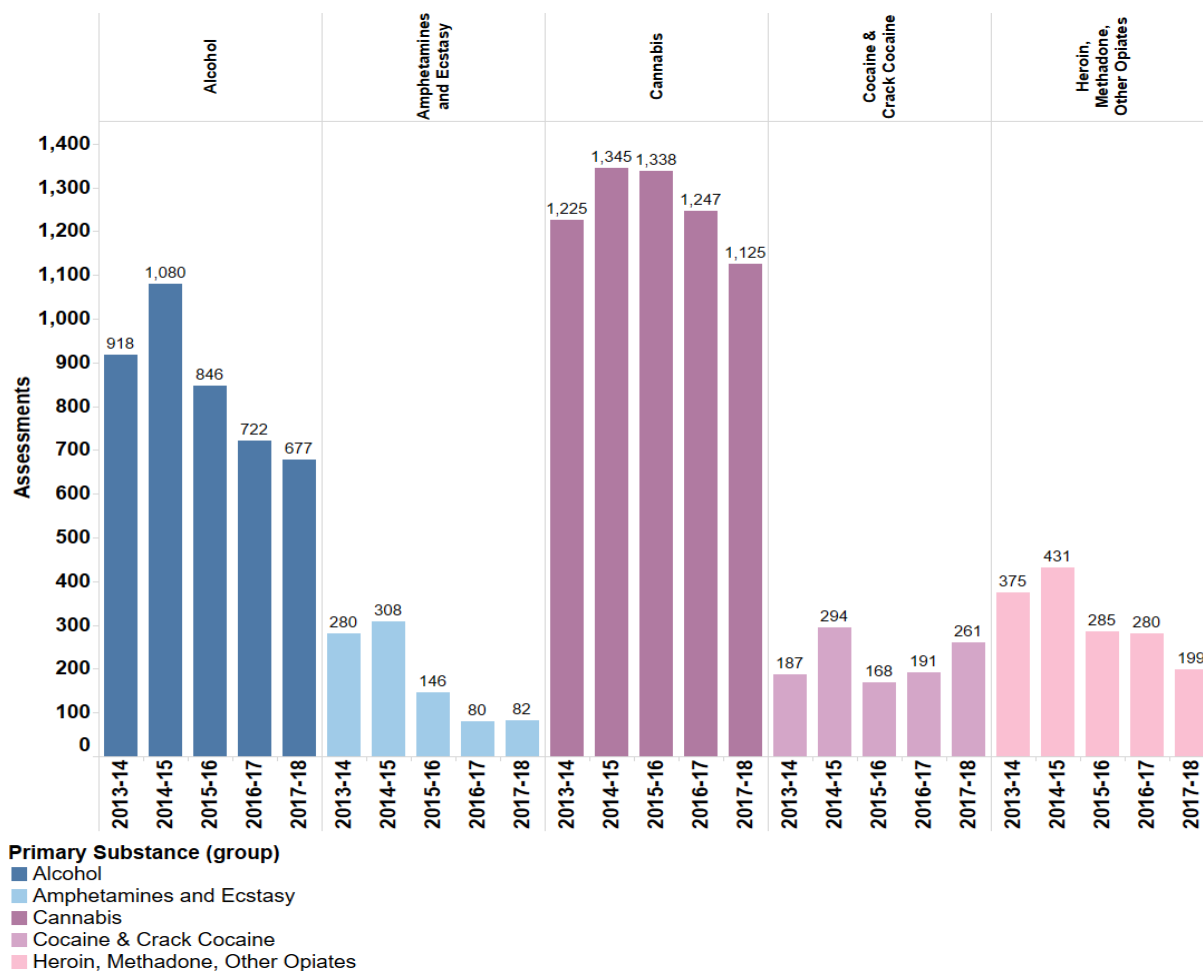
Source: Welsh National Database for Substance Misuse, 2018

Chart 23: Young people aged under 25 assessed by substance misuse services in Wales, by sex, age band and primary substance reported as problematic, 2017-18.¹⁷

Chart 24 shows the number of assessments by year and by primary substance reported at assessment in this age group. Despite a fall of 9.8 per cent compared with the previous year, cannabis/cannabinoids remain the substance most frequently reported as problematic at assessments of young people.

Cocaine and crack cocaine is the only substance group to have an increase in assessments in young people, increasing by 55.4 per cent since 2015-16 to 261 assessments. However, the highest number of assessments for cocaine amongst this age group was recorded in 2014-15 with 294 assessments. In all other substance types, the number of assessments in young people has declined over the past five years, most notably for primary problematic alcohol use and amphetamine and ecstasy use.

¹⁷ Where an individual was assessed more than once, details were taken from the first assessment



Source: Welsh National Database for Substance Misuse, 2018

Chart 24: Substance misuse assessments amongst young people under 25, by year and primary problematic substance reported 2013-14 to 2017-18, Wales

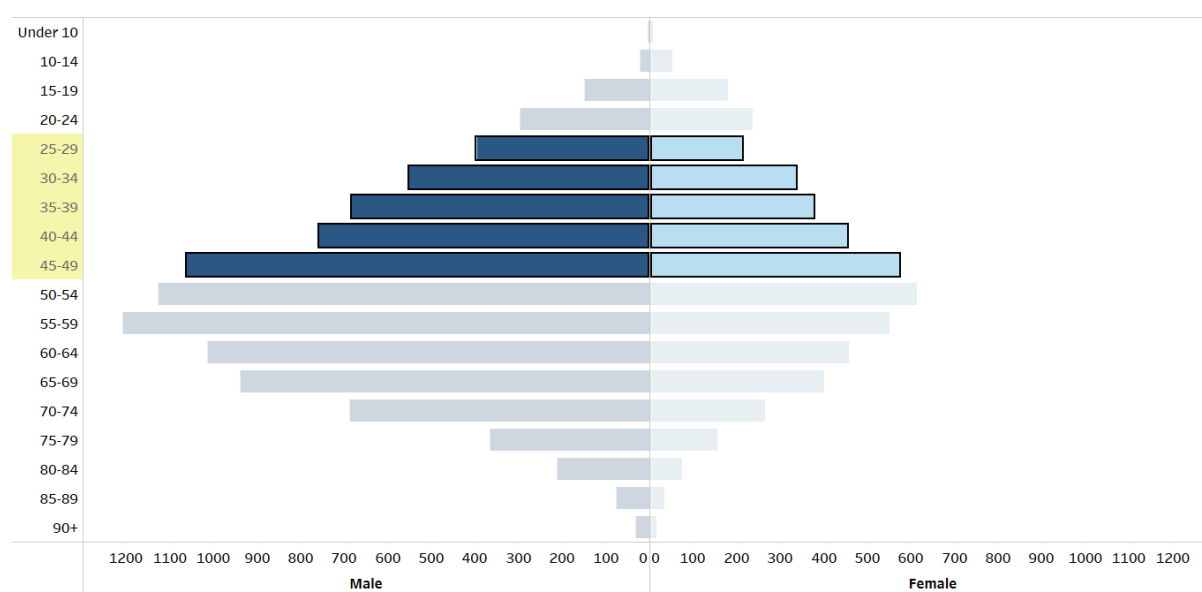
11. Working age adults (aged 25 to 49 years)

11.1 Hospital admissions for alcohol-specific conditions, working age adults

There were a total of 5,399 hospital admissions for alcohol-specific conditions amongst working aged adults in 2017-18, representing a decrease of 6.8 per cent on the previous year and 22.4 per cent over the last decade. In 2017-18, 1,508 (27.9 per cent) of these admissions included an alcohol-specific code in the primary position.

A total of 3,614 individual patients were admitted in 2017-18, of which 1,110 admissions (30.7 per cent) contained an alcohol-specific code in the primary position.

The majority of patients, 63.9 per cent, admitted for alcohol-specific conditions in this age group were male, a proportion that has been stable over the past five years. Working age adults represented 37.0 per cent of all individuals admitted for alcohol-specific conditions in 2017-18. Chart 25 shows individuals of working age admitted to hospital in 2017-18 with an alcohol-specific condition by sex and age group.

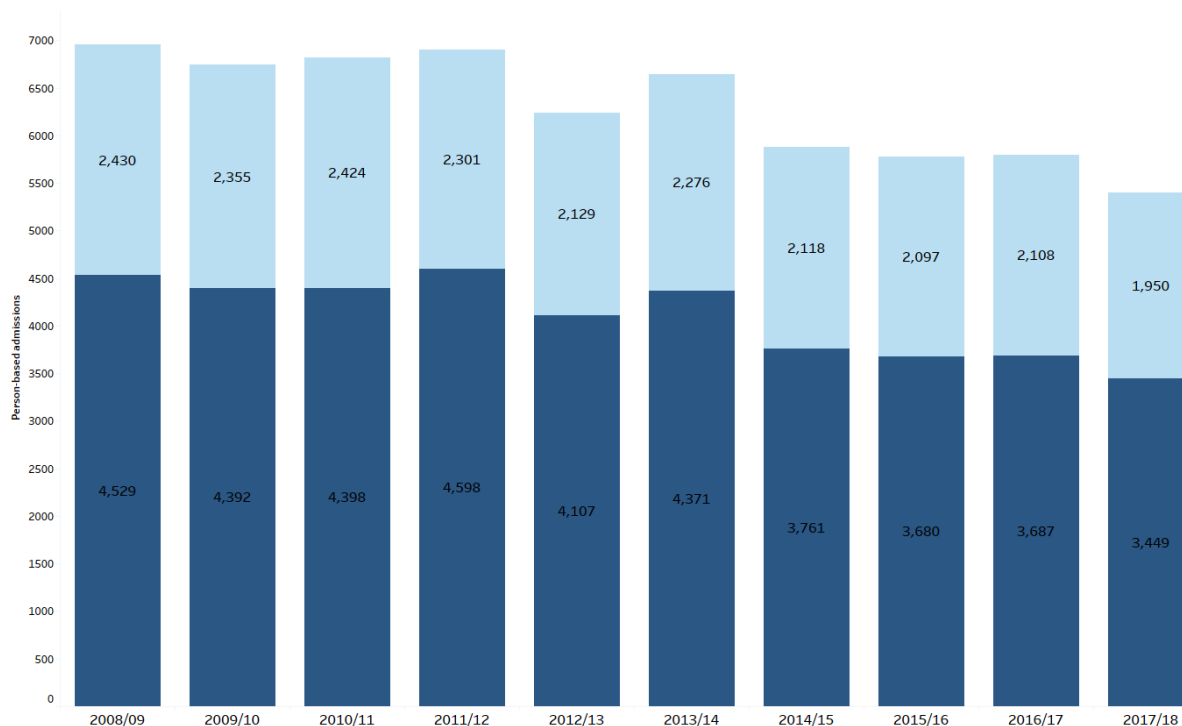


Source: Substance Misuse Programme / NHS Wales Informatics Service, 2018

Chart 25: Working age people aged 25-49 resident in Wales admitted to hospital with an alcohol-specific condition, by sex, age and diagnostic position of alcohol related condition, 2017-18¹⁸.

Chart 26 shows the number of hospital admissions for alcohol-specific conditions within the working age cohort.

¹⁸ Where an individual was admitted more than once in the year, the diagnostic position of first admission was included



Source: Substance Misuse Programme / NHS Wales Informatics Service, 2018

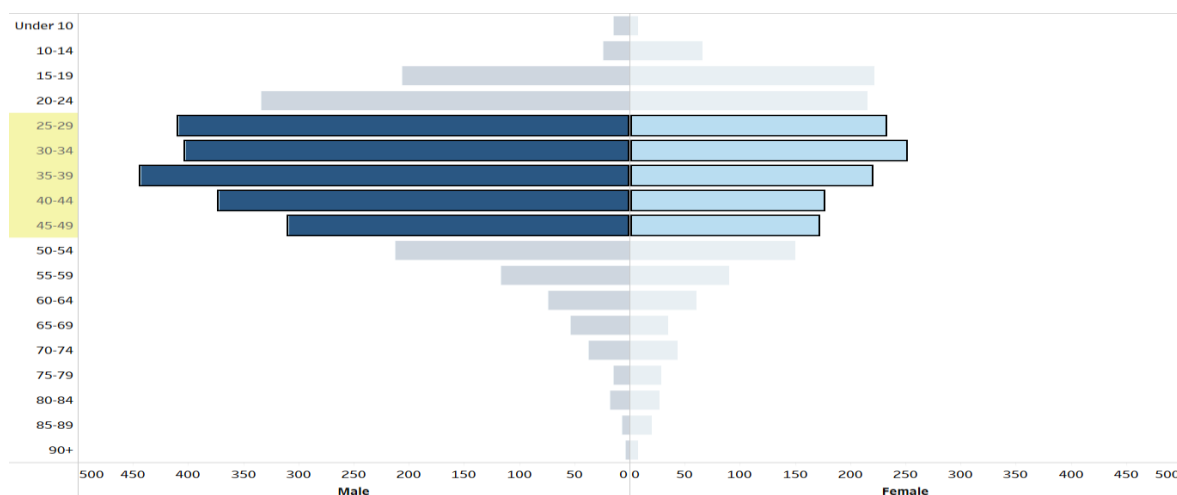
Chart 26: Hospital admissions for alcohol-specific conditions amongst working aged people aged 25-49 resident in Wales, by year and sex, 2008-9 to 2017-18

11.2 Hospital admissions for poisoning by illicit drugs in working aged people

There were 4,013 admissions related to the use of illicit drugs for this age cohort, involving 2,986 individuals. These numbers represent a decrease of 2.3 percent in admissions and marginal decrease of 0.9 per cent in individuals admitted when compared with 2016-17.

Individuals aged 25-49 made up 58.8 per cent of all those admitted for illicit drug related conditions in 2017-18, a decrease of 2.6 percentage points on the previous year. The sex split in this age cohort was substantially different to that found amongst younger people, with males accounting for 64.8 per cent of those admitted in 2017-18.

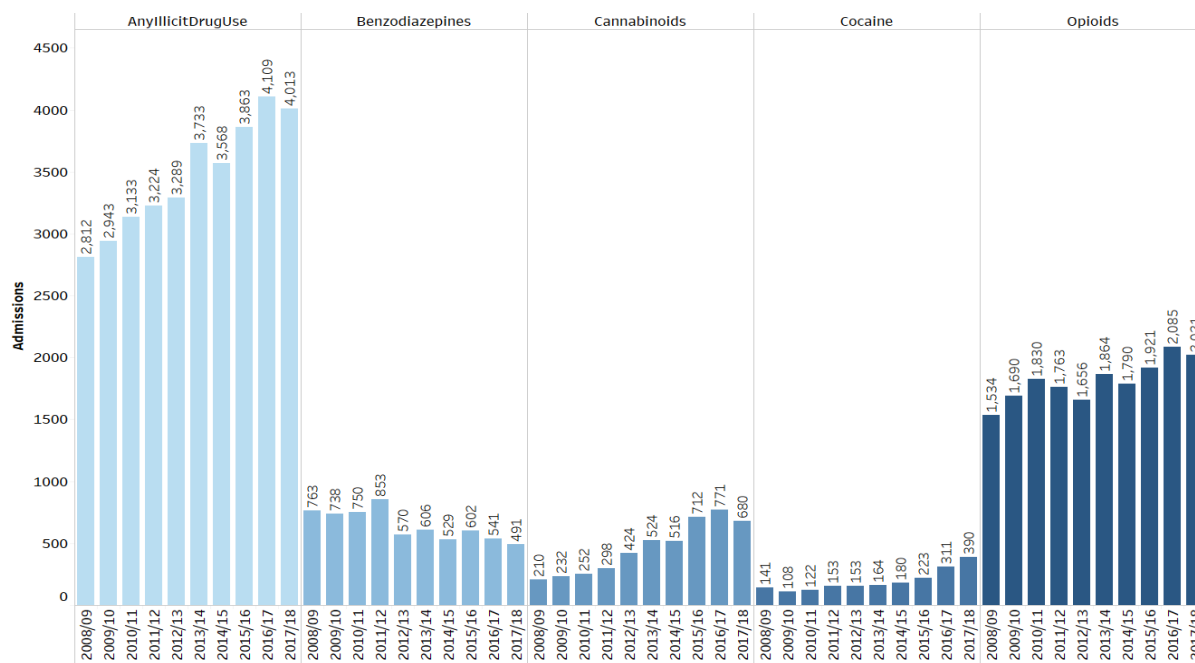
Within this age cohort, 30-39 was the age band in which the largest proportion of individual admissions were recorded, representing 25.9 per cent (n=1,317) of all person-based admissions. Chart 27 shows the number of working aged individuals resident in Wales and admitted to hospital following use of illicit drugs in 2017-18.



Source: Substance Misuse Programme / NHS Wales Informatics Service, 2018

Chart 27: Working age adults aged 25-49 resident in Wales admitted to hospital with a condition related to illicit drugs, by sex and age group, 2017-18

Chart 28 shows the number of illicit drug related admissions by substance type over the past five years for those aged 25-49 years. As indicated, the number of admissions for opioids has decreased compared to the previous year. However, it is still 8.4 per cent higher compared with 2013-14. Admissions for cannabinoids have also decreased compared to the previous year but remain 29.8 percent higher than 5 years ago. The only substance group to record an increase in admissions for this age group, as with other age cohorts, was cocaine which has increased by 137.8 percent over the last five years, from 164 to 390 admissions.



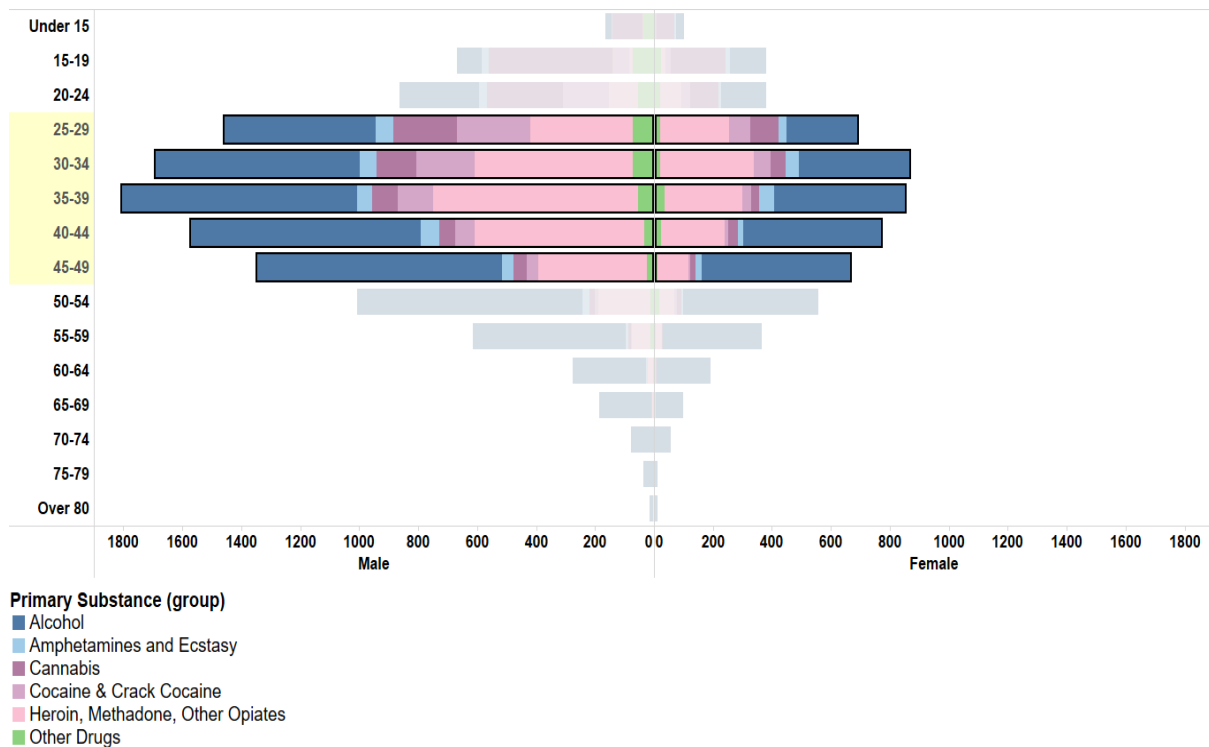
Source: Substance Misuse Programme / NHS Wales Informatics Service, 2018

Chart 28: Hospital admissions for named illicit drugs amongst working age people aged 25-49, resident in Wales by year and substance type.¹⁹

¹⁹ Individuals may have been admitted for more than one substance group and would have been included in each relevant group.

11.3 Assessment by substance misuse treatment services, working age adults

There were 11,706 assessments within specialist substance misuse services amongst individuals aged 25-49 in 2017-18, a reduction of 4.1 per cent from 2016-17. The assessments involved 10,483 unique individuals, representing 65.5 per cent of all individuals assessed in 2017-18. Of these, 32.7 per cent were women. The 35-39 age band contained the most individuals across all age bands, with 2,386 individuals (14.5 per cent). Chart 29 shows individuals assessed by substance misuse services in Wales in 2017-18 by age, sex and primary problematic substance type.

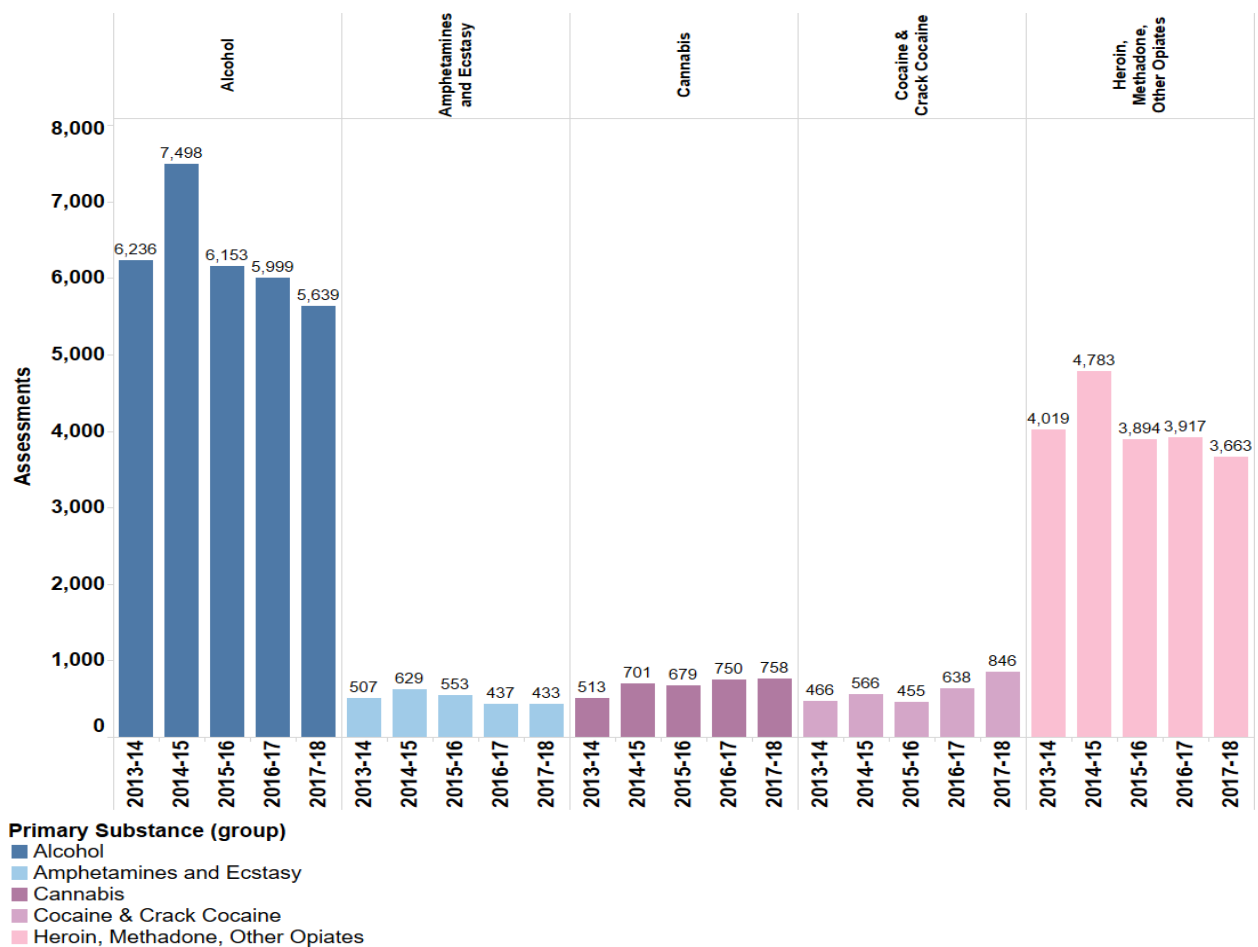


Source: Welsh National Database for Substance Misuse, 2018

Chart 29: Working aged adults aged 25-49 assessed by substance misuse services in Wales, by sex, age band and primary substance reported as problematic, 2017-18.²⁰

Chart 30 shows the number of assessments carried out with those aged 25-49 in Wales by year and primary substance type.

²⁰ Where an individual was assessed more than once, details were taken from the first assessment.



Source: Welsh National Database for Substance Misuse, 2018

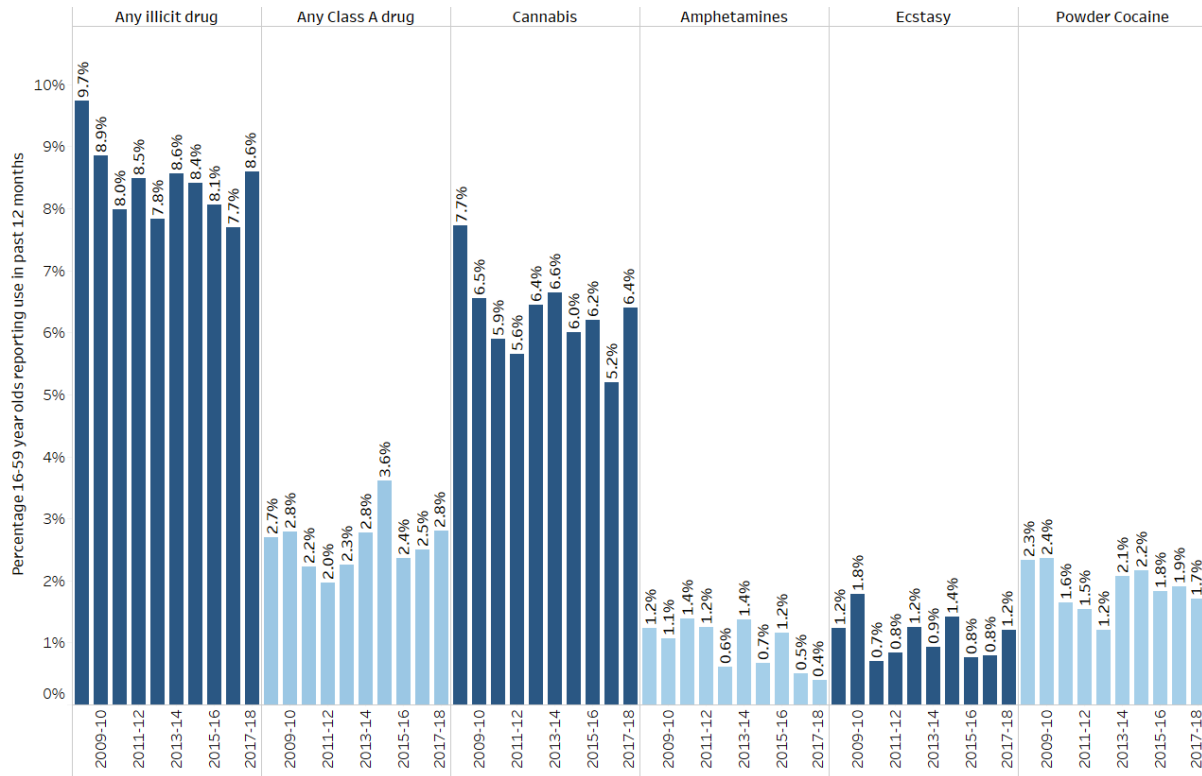
Chart 30: Substance misuse assessments amongst working aged adults aged 25-49, by year and primary problematic substance reported, Wales 2013-14 to 2017-18.

Alcohol was the most frequently reported problematic substance reported at assessment by this age group, with 5,639 assessments, a reduction of 6.0 per cent compared with the previous year. Substantial increases were seen in assessments in which crack/powder cocaine was reported as the primary problematic substance (32.6 per cent). This is the second consecutive year where a substantial increase has been reported in cocaine assessments, and an increase of 81.6 per cent since 2013-14.

The number of assessments in which opiates were recorded as the primary problematic substance have decreased by 6.5 per cent from 2016-17 to 3,663. In the same period, there has been a 5.0 per cent decrease in the number of unique individuals who have had assessments at which an opiate was recorded as the primary substance.

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

The Crime Survey for England and Wales (CSEW) is carried out annually.²¹ Whilst its principal purpose is to survey a representative sample of the population on their experiences of crime, it also includes a number of questions relating to individuals' own use of, and attitudes towards, illicit drugs. Chart 31 shows the percentage of adults in Wales self-reporting use of selected illicit substances.



Source: Office for National Statistics, 2018

Chart 31: Percentage of adults in Wales aged 16-59 self-reporting use of selected illicit drugs in past 12 months, 2009-10 to 2017-18.

Data from the CSEW for 2017-18 suggests that use of illicit drugs has increased from 7.7 per cent in 2016-17 to 8.6 per cent in 2017-18. This is the first increase observed following three consecutive years of decreases since 2013-14. Compared to the previous year, the self-reported use of:

- Any Class A drug has increased for the second year from 2.5 per cent to 2.8 per cent
- Powder Cocaine has dropped marginally from 1.9 per cent to 1.7 percent. This decrease does not concur with data either for assessments for substance misuse services in Wales or hospital admissions data presented earlier in this report, which have substantially increased over the last two years.
- Ecstasy has increased from 0.8 percent to 1.2 percent
- Cannabis has increased from 5.2 percent to 6.4 per cent

²¹ Office for National Statistics: Drug misuse finding from the 2017 to 2018 CSEW. Available at <https://www.gov.uk/government/statistics/drug-misuse-findings-from-the-2017-to-2018-csew>

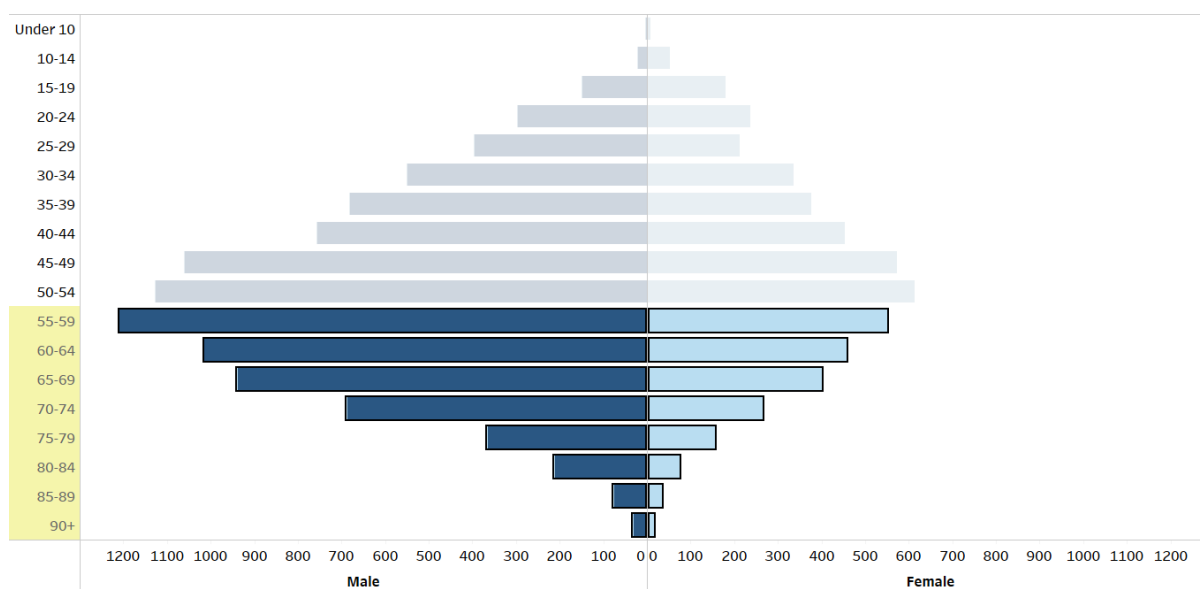
13 Older adults (aged 50 years and above)

13.1 Hospital admissions for alcohol-specific conditions, older adults

There were 8,236 hospital admissions for alcohol-specific conditions in 2017-18 where the patient was 50 or older, a decrease of 5.5 per cent on the previous year. Of these admissions, 1,640 (19.9 per cent) were for alcohol-specific conditions in the primary position.

There were 5,458 individual patients admitted, of which 1,332 (24.4 per cent) were for conditions in the primary position. Males accounted for 67.5 per cent of admissions, comparable to previous years. The 50+ age cohort made up 54.7 per cent of all those admitted for alcohol-specific conditions in 2017-18, marginally higher than the previous year.

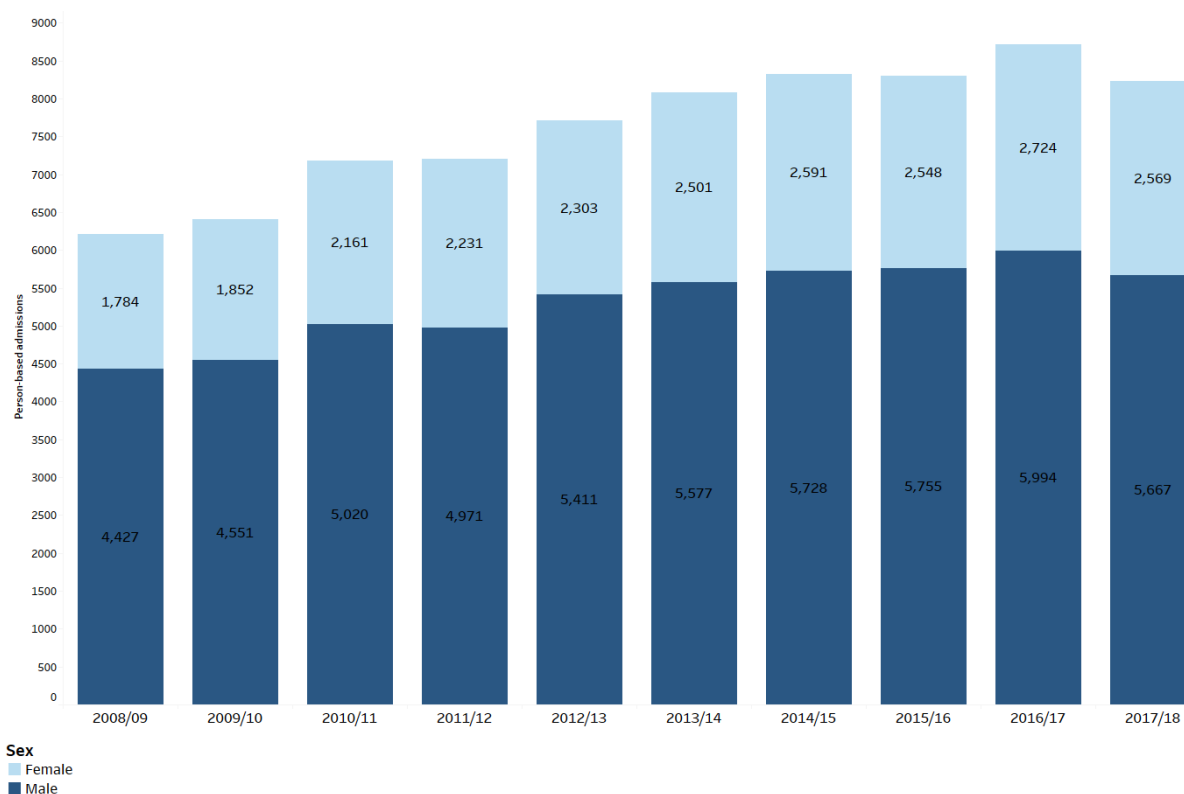
The five-year age band with the greatest number of individuals admitted falls within this cohort, with those aged 50-54 making up 11.3 per cent, or approximately one in eight of all alcohol-specific hospital admissions in 2017-18. Chart 32 shows the number of individuals aged 50+ admitted to hospital with an alcohol-specific condition in any diagnostic position in 2017-18 by sex and age group.



Source: Substance Misuse Programme / NHS Wales Informatics Service, 2018

Chart 32: Older people aged 50+ resident in Wales admitted to hospital with an alcohol-specific condition, by age band and sex and age 2017-18.

Chart 33 shows the number of admissions involving those aged 50 years or more involving an alcohol-specific condition. Although admissions in this cohort are lower than the previous year, they are 32.6 per cent higher than comparable admissions in 2008-09.



Source: Substance Misuse Programme / NHS Wales Informatics Service, 2018

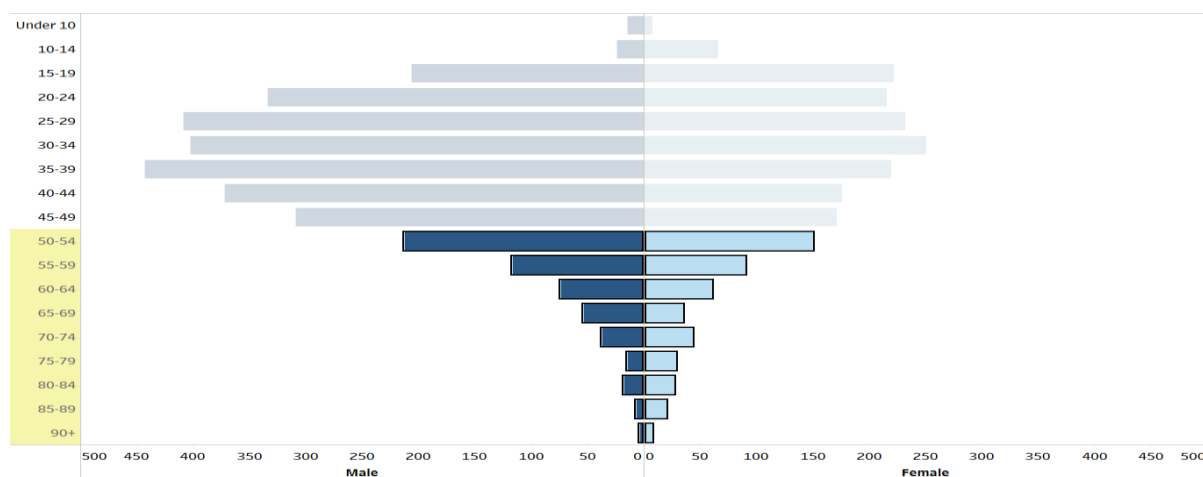
Chart 33: Hospital admissions for alcohol-specific conditions amongst older people aged 50+ resident in Wales by year and sex, 2008-09 to 2017-18.

13.2 Hospital admissions for poisoning with illicit drugs in older adults

There were 1,222 illicit drugs related admissions involving individuals aged 50 years or older, a decrease of 2.1 per cent on 2016-17. These admissions related to 1,003 individuals. 53.7 per cent of patients were male, a proportionate increase from the 48.7 percent recorded in 2013-14. .

Individuals aged 50 and over made up 19.7 per cent of all those admitted in 2017-18 following illicit drug use.

Within this broad age cohort, the 50-54 age category reported the largest number of individuals, representing 7.0 per cent of all individuals admitted for illicit drugs across all age categories. Chart 34 shows the number of older individuals resident in Wales and admitted to hospital following use of illicit drugs in 2017-18.

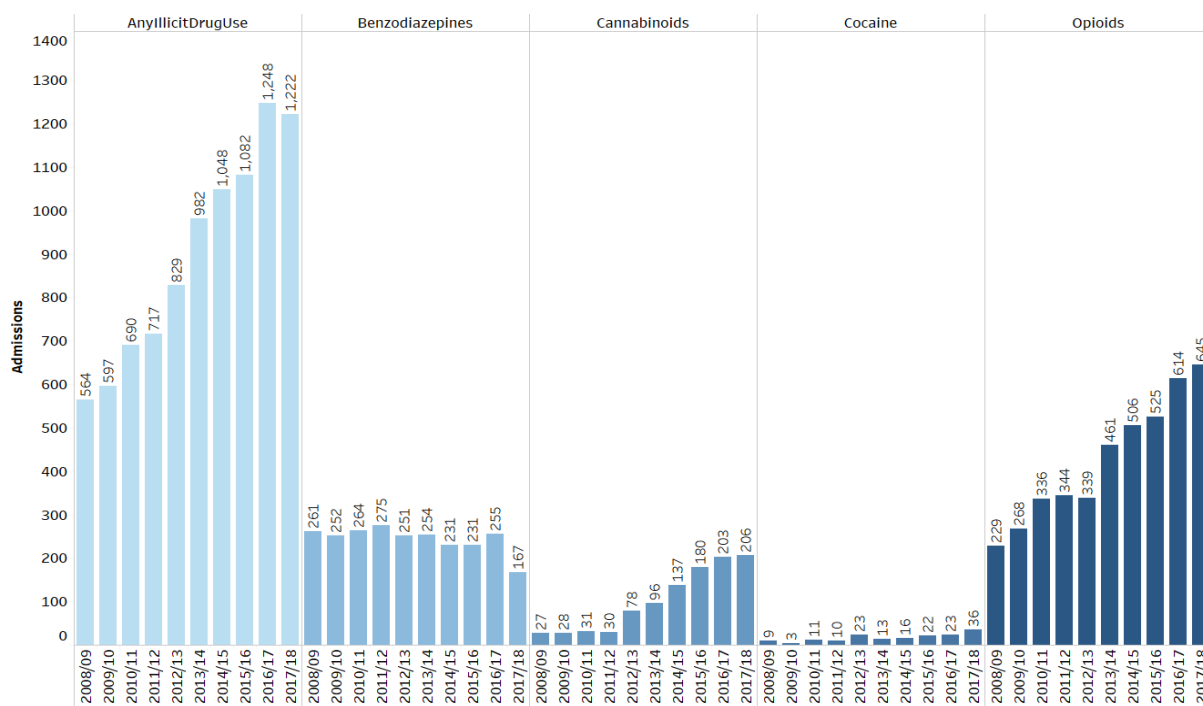


Source: Substance Misuse Programme / NHS Wales Informatics Service, 2018

Chart 34: Older people aged 50+ resident in Wales admitted to hospital with a condition related to illicit drugs, by sex and age, 2017-18.

Chart 35 shows the number of illicit drugs related admissions by substance type over the past ten years for those aged 50+. Opioids were the drug most frequently reported with 645 admissions. This represented a rise of 5.1 per cent increase from 2016-17 and a continuation of the linear trend observed since 2012-13. Over the last decade, hospital admissions for opioid use in the older age cohort have increased almost three-fold, from 229 in 2008-9.

There were considerably fewer admissions involving other illicit drugs within this age category, however, the rise in cannabinoid-related admissions is notable, increasing by 114.6 percent since 2013-14. The number of admissions following use of cocaine has increased over the last 5 years, however numbers remain low.

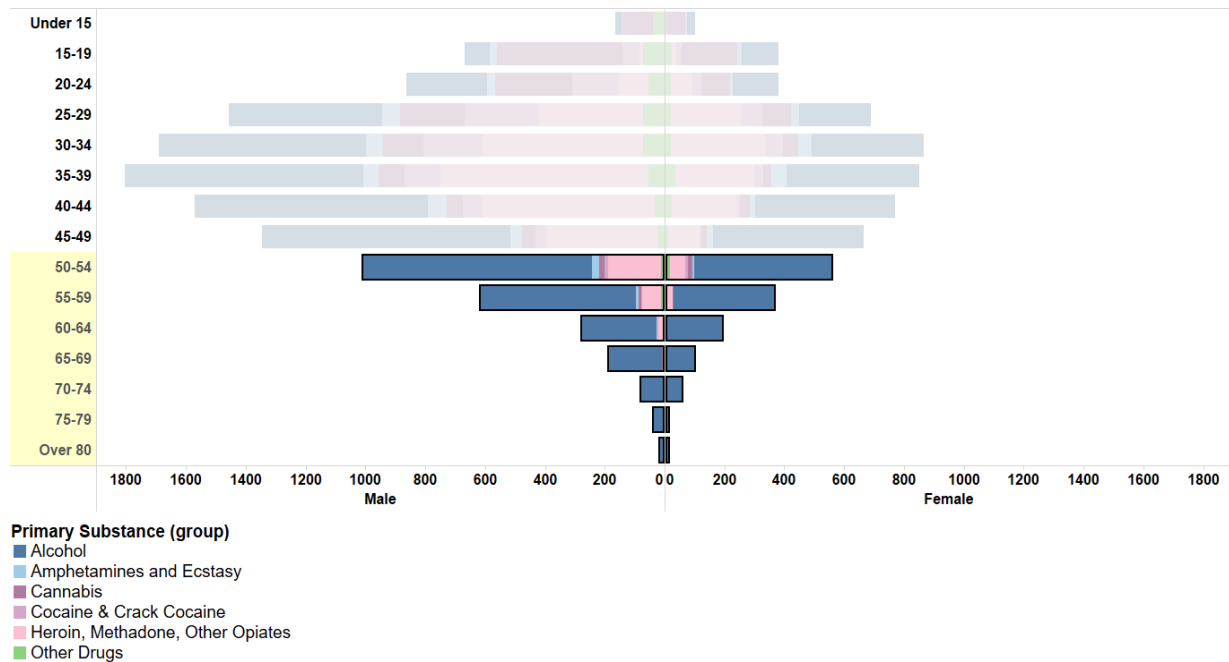


Source: Substance Misuse Programme / NHS Wales Informatics Service, 2018

Chart 35: Hospital admission for conditions related to illicit drugs amongst older people aged 50+ resident in Wales by year and substance type.

13.3 Assessment by substance misuse treatment services, older adults

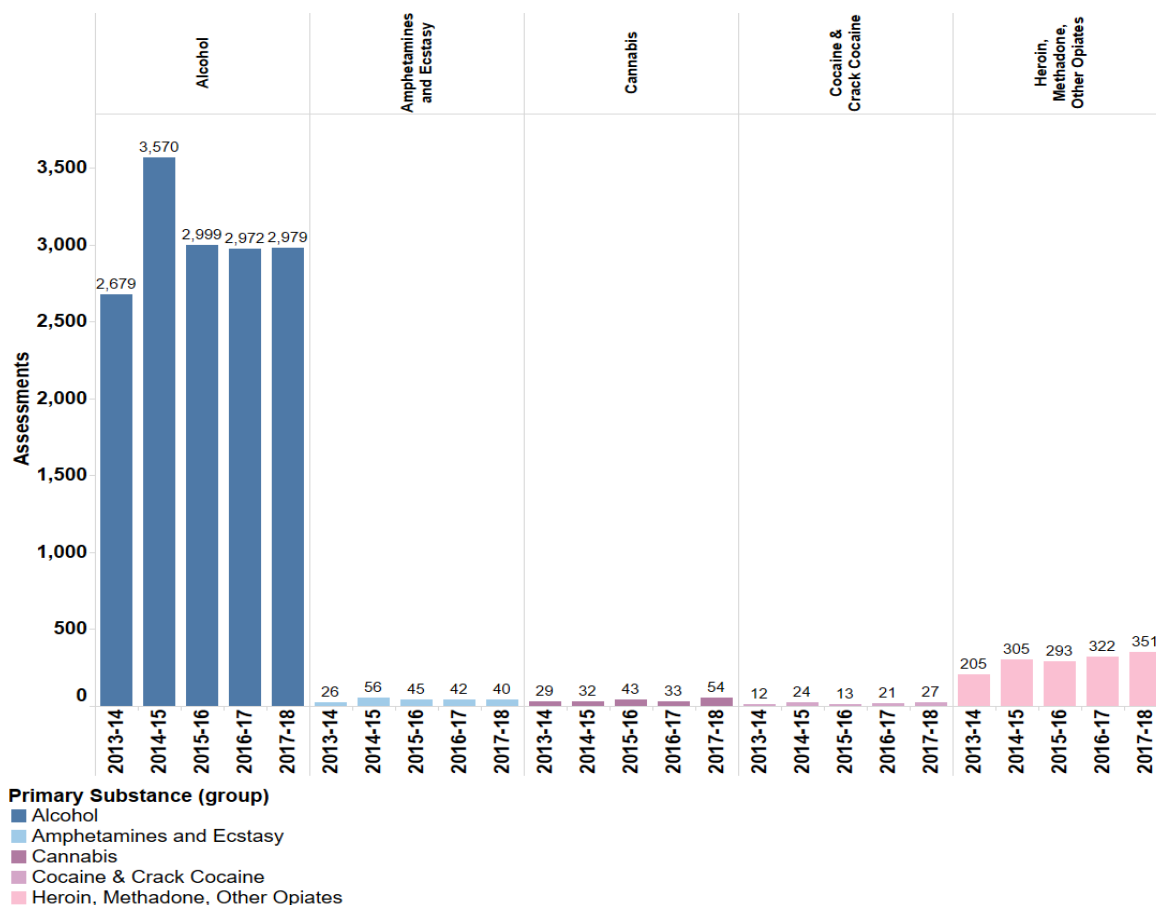
There were 3,510 assessments of individuals aged 50 and over recorded on the Welsh National Database for Substance Misuse in 2017-18, an increase of 1.2 per cent on 2016-17. These assessments involved 3,116 unique individuals, of which 37.3 per cent (n=1,162) were female. A substantial majority of those assessed within this age cohort, 72.0 per cent (n=2,244), were aged 50-59 years. Chart 36 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, 2018

Chart 36: Older people (aged 50+) assessed by substance misuse services in Wales, by sex, age band and primary problematic substance reported, 2017-18.

As shown in Chart 37, alcohol was the most frequently presenting problematic substance, representing 84.9 per cent of assessments (n=2,979). This compares with 10 percent (n=351) of assessments where opioids were reported as the main problematic substance. Whilst there has been an increase in the number of assessments, 322 in 2016-17 to 351 in 2017-18, the proportion of all assessments where an opioid was considered the primary problematic substance has remained stable. In 2017-18 there were 40 assessments reporting stimulants, 54 reporting cannabis and 27 reporting cocaine or crack.



Source: Welsh National Database for Substance Misuse, 2018

Chart 37: Substance misuse assessments amongst older adults aged 50+, by primary problematic substance reported, Wales 2013-14 to 2017-18.

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 Needle and Syringe Programmes (NSPs) across Wales. Since April 2014, pharmacy provision of injecting equipment has also been included. Details of how data is gathered through the HRD and the most recent HRD reports are available online.²²

This year, the definition of a regular individual was updated. An individual was considered a 'regular' user of NSPs in Wales if they had:

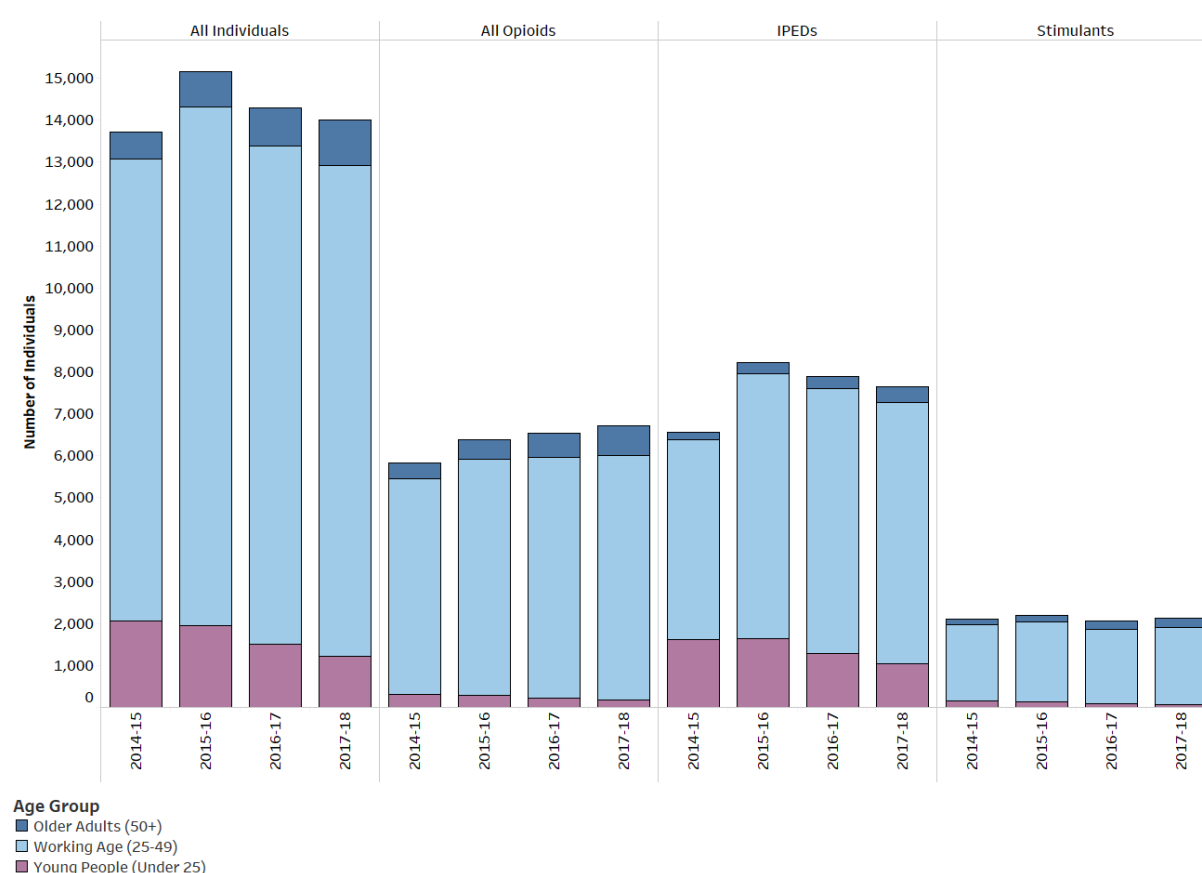
- Accessed NSP services at least two or more times in the current year
- Accessed NSP services for injecting image and performance enhancing drugs and accessed services at least once in the current and previous year.

²² Public Health Wales: Harm reduction database - Needle and Syringe Provision 2017-18. Available at <http://www.wales.nhs.uk/sitesplus/888/page/72997>

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

Data is reported by substance group. As injecting and problematic drug use often involves use of more than one substance, individuals may be included in multiple substance groups.

In 2017-18, a total of 25,190 individuals accessed NSP services in Wales. Of these, 14,000 were defined as people who inject drugs (PWID) regularly and access NSP services. The remaining 11,190 individuals (44.4 per cent) attended an NSP service only once in 2017-18. Chart 38 shows the number of regular individuals accessing NSP services between 2014-15 and 2017-18, by age and substance group. Stimulants include amphetamine, crack and cocaine, mephedrone and other cathinone substances.



Source: Harm Reduction Database Wales 2018

Chart 38: People who inject drugs and regularly access Needle and Syringe Programmes in Wales, by age group, year and substance group, 2014-15 to 2017-18²³

14.1.1 Young people aged up to 24

In 2017-18, young people represented 8.7 per cent (n=1,219) of all individuals regularly attending NSP services, down from 10.6 per cent in the previous year. This is the third consecutive year that the proportion of NSP clients in this age group has decreased. This trend was observed across all substance groups.

²³ 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.

Of all regular attenders of NSP services aged under-25:

- 92.1 per cent of were male
- 85.7 per cent (n=1,045) reported IPED use
- 15.1 per cent (n=183) reported opioid use
- 4.7 per cent (n=57) reported stimulant use

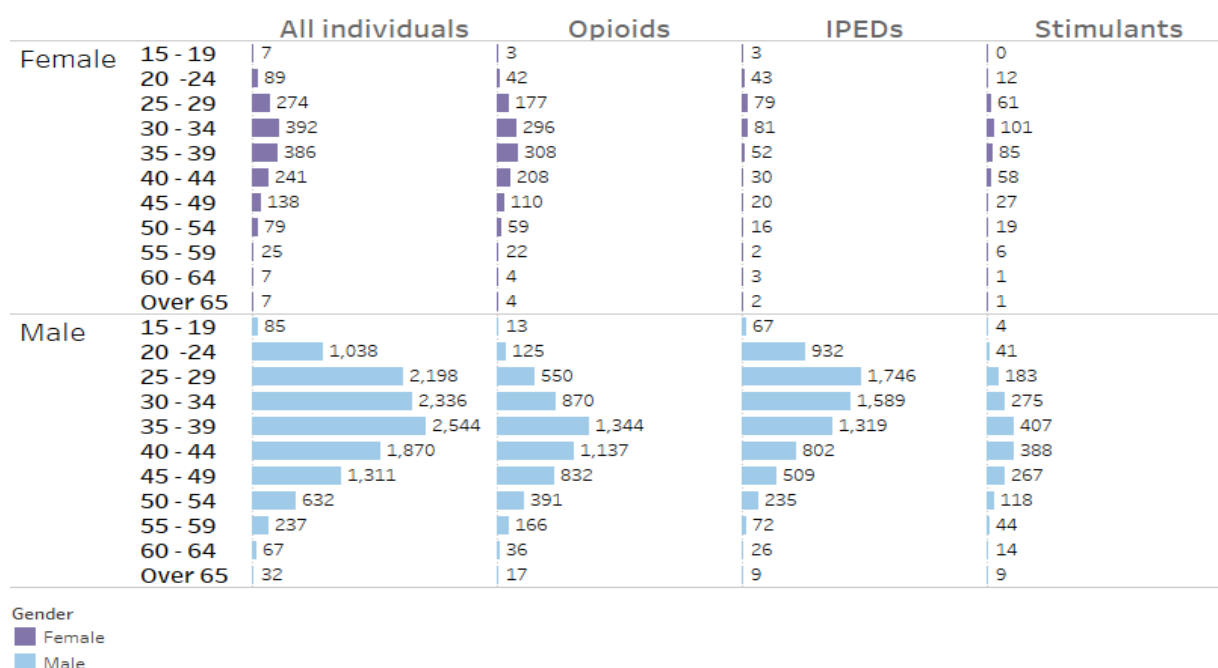
There were a further 1,216 records for young people who attended an NSP service only once in 2017-18. Of these 86.2 percent were male.

14.1.2 Working aged adults 25-49

People who inject drugs aged 25-49 years made up the majority of those regularly accessing NSPs in Wales, with a total of 11,691 individuals (83.5 per cent) in 2017-18. This represents a small decrease (1.6 per cent) from the previous year. Of this total:

- 87.8 per cent (n=10,259) were male
- 53.3 per cent (n=6227) reported IPED use
- 49.9 per cent (n=5833) reported opioid use
- 15.8 per cent (n=1853) reported stimulant use

Although there was a decrease in the overall number of working aged individuals accessing NSP services, the number of individuals reporting opioid use has increased each year since 2014-15. The proportion of male to female PWID varied by primary drug type as shown in Chart 39.



Source: Harm Reduction Database Wales, 2018

Chart 39: Number of people who inject drugs, regularly accessing NSP services by sex, age band and substance group, Wales, 2017-18.²⁴

²⁴ Individuals reporting poly-drug use may be included in more than one substance group.

There were an additional 8,982 records for working aged adults who attended NSP services only once in 2017-18, of which 86.1 per cent were male.

14.1.3 Older aged adults 50+

There were 1,086 individuals aged 50 years or more regularly attending NSP services in 2017-18, representing 8.7 per cent of the total. This is an increase of 19.3 percent compared to the previous year, a trend that has been observed each year since 2014-15.

Of the 1,086 older people accessing NSPs:

- 89.1 per cent (n=968) were male
- 33.6 per cent (n=365) reporting IPED use
- 64.3 per cent (n=699) reported opioid use
- 19.5 per cent (n= 212) reported stimulant use

There were an additional 991 records for older aged adults who attended NSP only once in 2017-18 of which 87.9 per cent were male.

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.

14.2.1 Unlinked Anonymous Monitoring Survey of people who inject drugs

Evidence on direct and indirect sharing and blood borne virus (BBV) testing and prevalence is available from two sources. Firstly, data is gathered by the Unlinked Anonymous Monitoring (UAM) Survey of People Who Inject Drugs (PWID), an annual survey of PWID accessing specialist drug services in England, Wales and Northern Ireland, co-ordinated by Public Health England.²⁵ 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. There were 212 UAM survey participants in Wales in 2017.²⁶

Direct and indirect sharing

A total of 20 per cent (n=42) of respondents reported direct sharing of injecting equipment (previously used needles and syringes) during the last 28 days, an increase of 9 percentage points on the previous year. This rose to 35 per cent (n=74) when accounting for direct and indirect (injecting paraphernalia including filters and cookers) sharing in the last 28 days.

Both practices represent a clear risk for transmission of blood borne viruses as well as bacterial infections. Symptoms of injecting site infection were reported by 50 (n=698) per cent of UAM participants across England, Wales and Northern Ireland.

²⁵ Further information and data from the Unlinked Anonymous Monitoring Survey is available at: <https://www.gov.uk/government/statistics/people-who-inject-drugs-hiv-and-viral-hepatitismonitoring#history>

²⁶ Not every question was answered by all interviewees

Prevalence of blood borne virus infection amongst people who inject drugs

A total of 18 of 212 respondents in Wales provided dry blood spots which tested positive for hepatitis B (hepatitis B core antigen), a rate of 8.5 per cent, down from 13 per cent in 2016. This is the lowest proportion since dry blood spot testing was first carried out as part of the UAM in 2011. The uptake of hepatitis B vaccination amongst UAM participants in Wales was reported as 76 per cent (n= 158), up from 67 percent in 2016. With the exception of 2016, the proportion has remained stable since 2011.

The proportion with reactive test results for hepatitis C antibodies was 50 per cent (158 of 208 respondents). Rates of hepatitis C have risen substantially in Wales over the last decade. However, with the advent of highly effective, available and tolerable treatment, along with the introduction of routine community opt-out testing, diagnosis and referral to treatment, it is expected that this trend will be reversed in the coming years.

The rate of HIV infection was 0.9 per cent amongst those from Wales participating in the UAM in 2017, a rate that has remained stable over time.

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 2017, there were 104 new cases of HIV amongst Welsh residents. However, fewer than five of these new infections each year are believed to be as a result of injecting drug use²⁷.

14.2.2 Harm Reduction Database: Blood Borne Virus module

The second source of data is the Public Health Wales Harm Reduction Database (HRD) Blood Borne Virus module.²⁸ 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 the WHO Hepatitis C elimination targets.²⁹

In 2017, the baseline year for data collection, there were:

- 1,606 individuals tested for hepatitis C within specialist substance misuse services. Overall 18 per cent (n=267) of cases had antibodies detected (reactive). Amongst those reporting ever injecting, the proportion of reactive cases was 31.3%; amongst recent initiates to injecting the rate was 14.4%; and amongst those reporting injecting both heroin and crack/cocaine the rate rose to 42.5%.

²⁷ Public Health England (2018) HIV surveillance data in the UK by demographic characteristics and geographical region <https://www.gov.uk/government/statistics/hiv-annual-data-tables>

²⁸ Public Health Wales: Harm Reduction Database Wales: Blood borne virus testing and treatment in community setting 2017-18. Available at : <http://www.wales.nhs.uk/sitesplus/documents/888/BBV%20Annual%20report%202017-18%20FOR%20PUBLICATION.pdf>

²⁹ Welsh Health Circular: Attaining the WHO targets for eliminating hepatitis (B and C) as a significant threat to public health. Available at : <http://cardiffandvaleapb.org/download/media-resources/WHC-2017-048-Attaining-the-WHO-targets-for-eliminating-hepatitis-B-and-C-as-a-significant-threat-to-public-health.pdf>

- 1,561 individuals tested for hepatitis B. Less than 1 per cent of individuals were hepatitis B core antigen positive.
- 1,412 individuals tested for HIV. No cases were identified.

14.3 Estimates of problematic drug use in Wales

Problem drug use (PDU) is defined by the European Monitoring Centre for Drugs and Drug Addiction (EMCDDA) as “injecting drug use or long duration or regular use of opioids, cocaine and/or amphetamines [including amphetamine type substances]”.³⁰ Provisional headline figures for problem drug use estimates in Wales, including populations not in contact with any services, suggest that the total number of problem drug users in 2015-16 was 49,370 (95% confidence interval (CI) 42,230 – 58,540). However, variation in the datasets on which these figures are based has been identified and therefore these figures are subject to revision and will be not specified by age group within this report. Details of the methods used to produce PDU figures for Wales is given in Appendix G.

Updated figures for 2016-17 and 2017-18 are not currently available but work is ongoing within Public Health Wales to progress this.

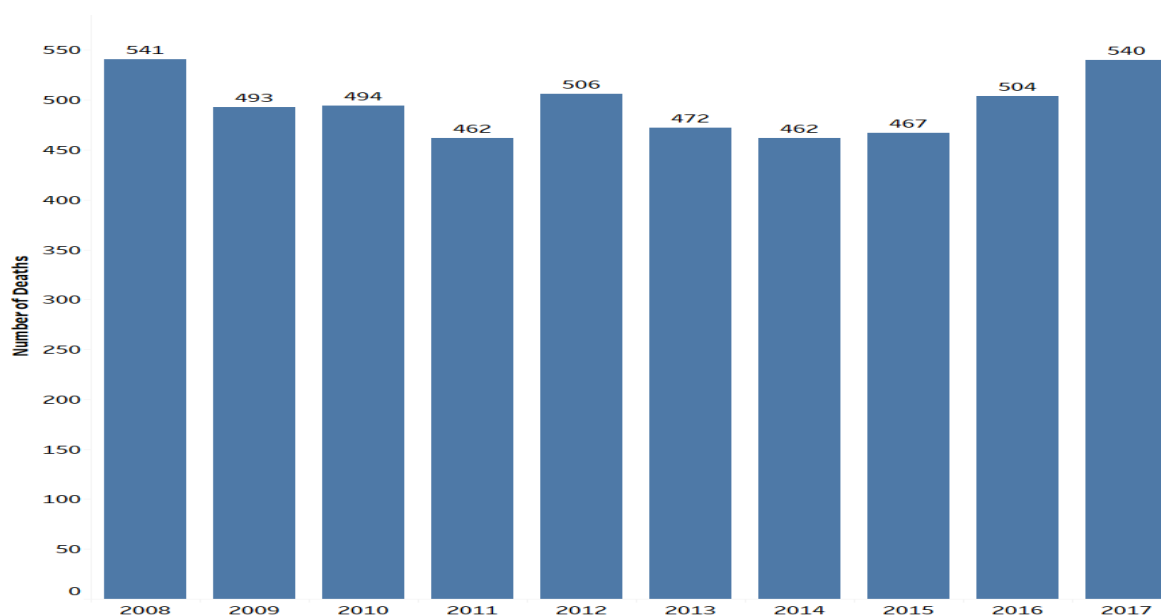
³⁰ EMCDDA (2004) Recommended Draft Technical Tools and Guidelines - Key Epidemiological Indicator: Prevalence of problem drug use. Lisbon: EMCDDA, 2004. Available at: <http://www.emcdda.europa.eu/stats07/PDU/methods>

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. Subsequent subsections will present more detailed figures produced by the NHS Wales Informatics Service (NWIS) using the AAF method.

Using the ONS definition, in 2017 there were 540 alcohol-specific deaths registered in Wales, an increase of 7.1 per cent on the previous year. This is the highest recorded number of alcohol deaths in Wales since 2008 (541 deaths). Of this total, 64.1 per cent (n=346) of deaths involved males. Chart 40 shows the number of alcohol-specific deaths registered in Wales in each of the past ten years using the ONS method by year.

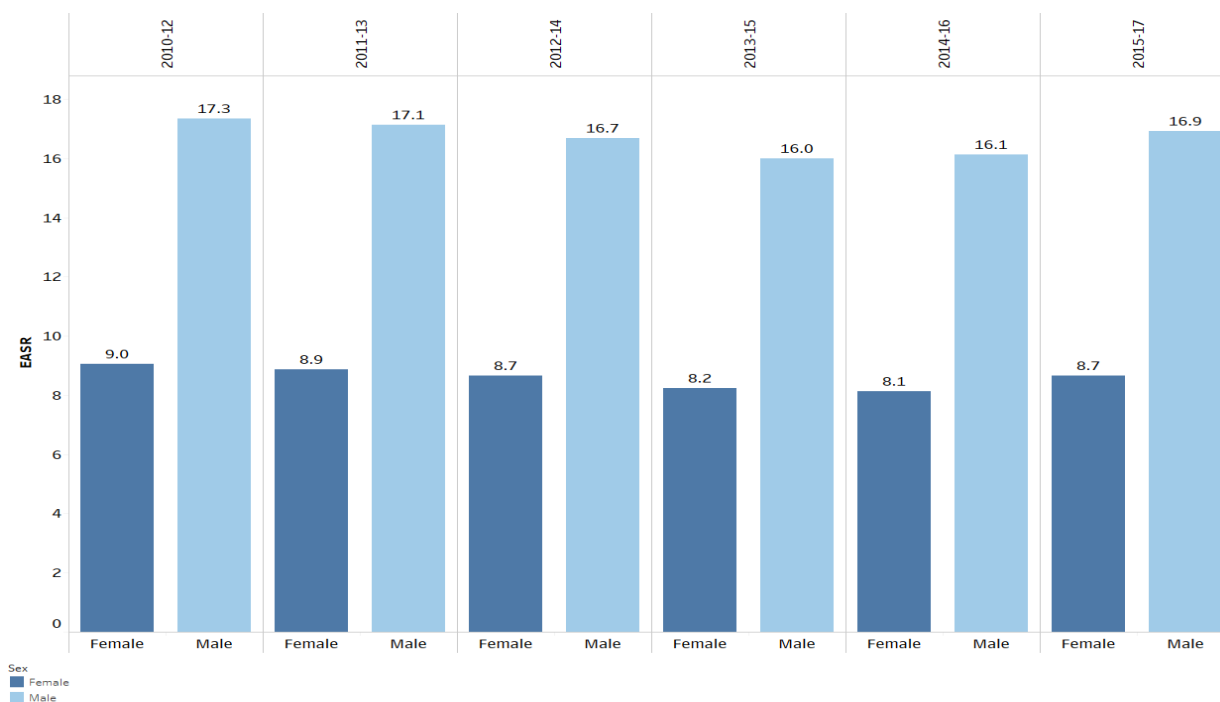


Source: Office for National Statistics, 2018

Chart 40: Number of alcohol-specific deaths by registered year of death in Wales 2008-2017

15.2 Rates of alcohol-specific deaths in Wales by sex and Health Board area of residence

The rolling average of deaths from alcohol-specific causes over the most recent five years shows that the EASR of deaths per 100,000 population has decreased since 2010-12. However, the rate of deaths in 2015-17 was 5.4 per cent higher compared to the previous year increasing from 12.0 to 12.7 deaths per 100,000 population. This increase in rate of death was observed in both males (5.0 per cent) and females (6.5 per cent), although the rate of death was higher amongst males (16.9 per 100,000 population) than females (8.7 per 100,000 population) as shown in Chart 41.



Source: Office for National Statistics and NHS Wales Informatics Service, 2018

Chart 41: 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 averages of alcohol-specific mortality, as can be seen in Chart 42. The highest rates were recorded in ABMU (16.0 deaths per 100,000 population) and Cwm Taf (15.5 deaths per 100,000 population) Health Board areas. These were more than twice the rate recorded in the Powys Teaching Health Board area, with an average of 7.9 alcohol related deaths per 100,000 over the period 2015-17.

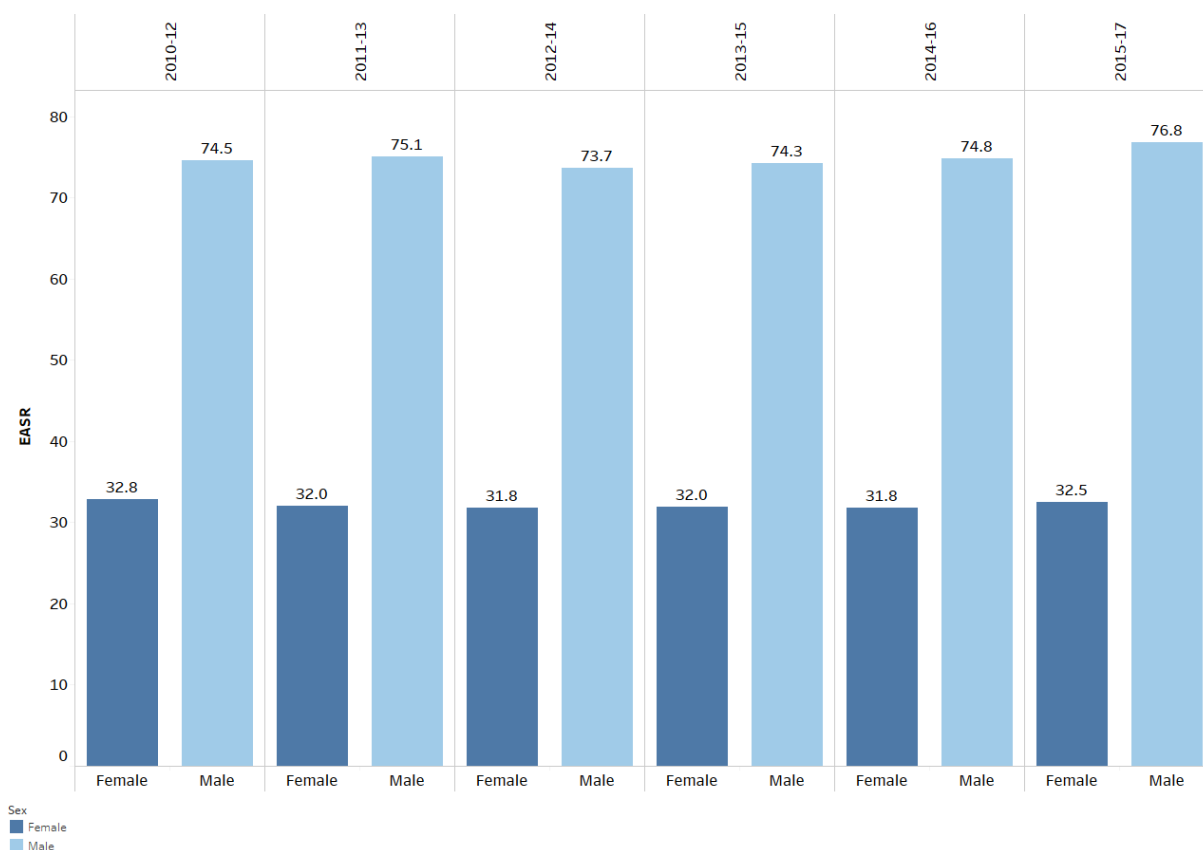


Source: Office for National Statistics and NHS Wales Informatics Service, 2018

Chart 42: European age standardised rate of alcohol specific deaths, Wales, three year rolling averages, deaths registered in 2015-17, by Health Board

15.3 Alcohol-attributable mortality

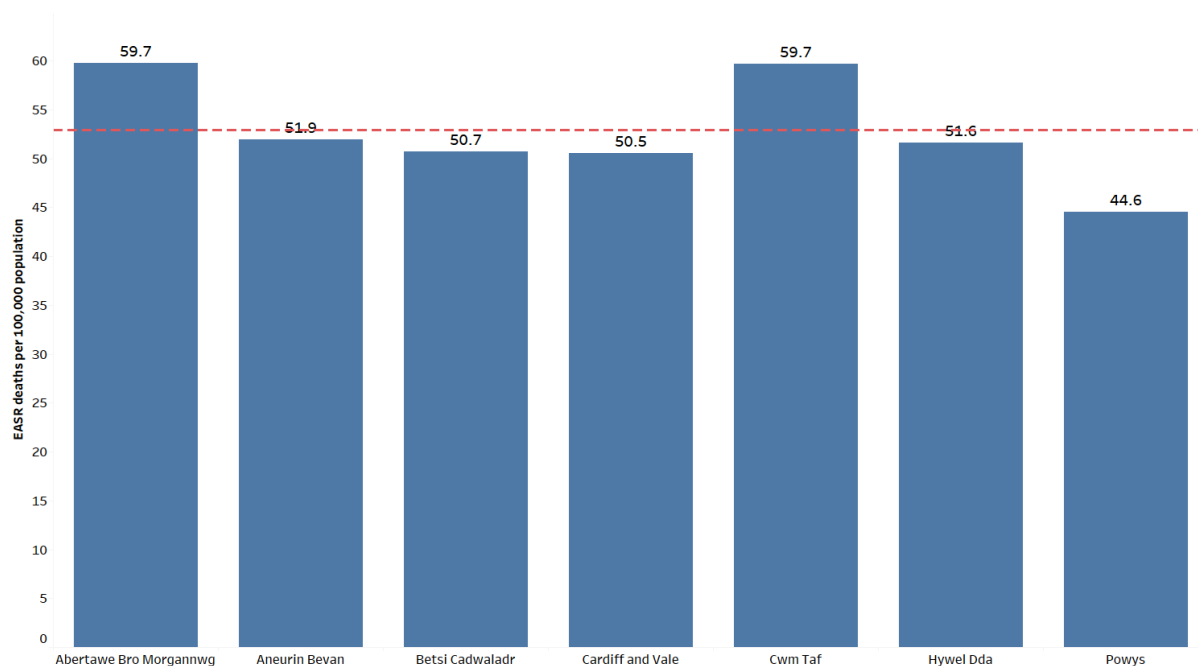
Between 2015-17 the rate of alcohol-attributable mortality in Wales was 52.9 deaths per 100,000 population, an increase of 2.8 percent compared to the previous year. Alcohol-attributable mortality is at the highest rate in 5 years. The rolling average rates of alcohol-attributable mortality are shown in Chart 43. The EASR for males increased by 2.7 per cent and for females by 2.2 per cent for the period 2015-17 compared to 2014-16.



Source: Office for National Statistics and NHS Wales Informatics Service, 2018

Chart 43: European Age Standardised Rate of alcohol-attributable deaths, AAF method, Wales, three year rolling averages, by sex and year of death registered, 2010-12 to 2015-17.

Chart 44 shows alcohol-attributable mortality by Health Board for the five most recent three-year rolling average periods. The pattern amongst Health Boards is similar to that for alcohol-specific mortality described above, although the differences between health boards are proportionately smaller. For the population of Wales, the standardised rate is 52.9 per 100,000 population. Cwm Taf and ABMU were the Health Boards with the highest EASR for alcohol-attributable mortality at 59.7 per 100,000 population; Powys Teaching recorded the lowest average rate for 2015-17 with 44.6 per 100,000 population.



Source: Office for National Statistics and NHS Wales Informatics Service, 2018

Chart 44: European age standardised rate of alcohol-attributable deaths, AAF method, Wales, three year rolling averages, deaths registered in 2015-17, by Health Board

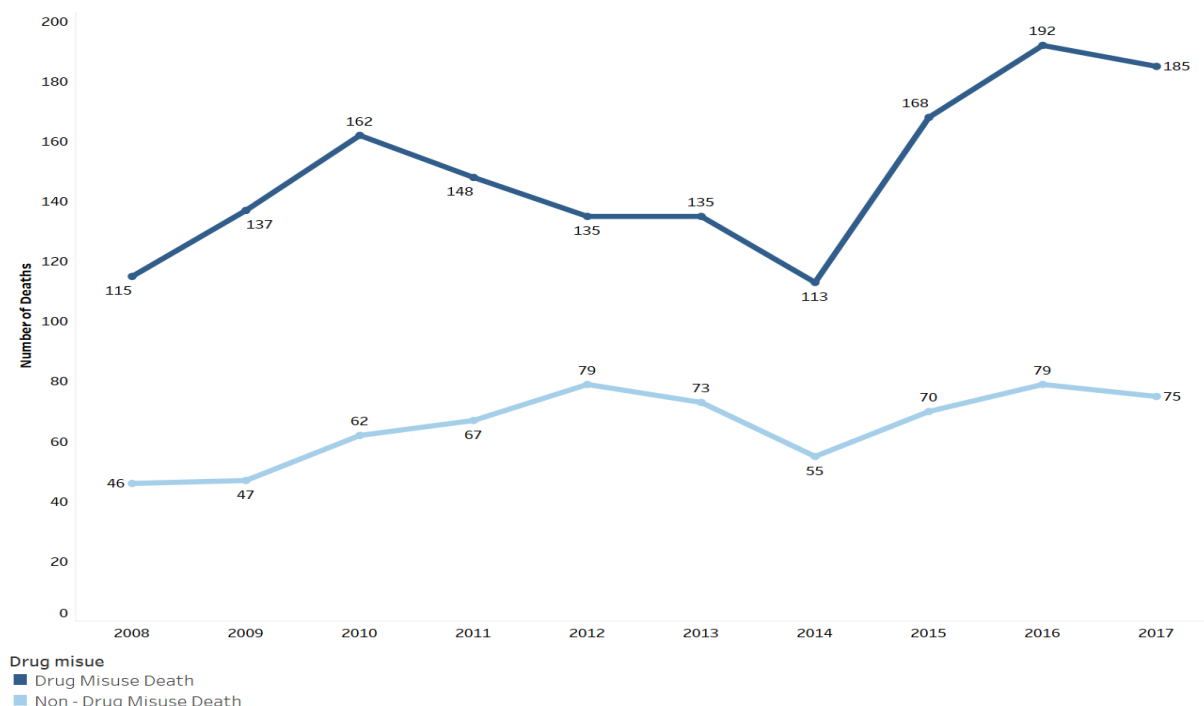
16. Drug related deaths

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.³¹

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

In 2017, 260 deaths due to drug poisoning were registered in Wales, a decrease of 4.1 per cent from the previous calendar year. Of all drug-poisoning deaths, 185 (71.2 per cent) were defined as a drug misuse death, a reduction of 3.7 per cent from 192 deaths in 2016.

Although the number of drug poisoning and drug misuse deaths in Wales have both decreased in 2017, drug deaths remain high. This is demonstrated by 2017 recording the second highest number of deaths in the last 10 years.



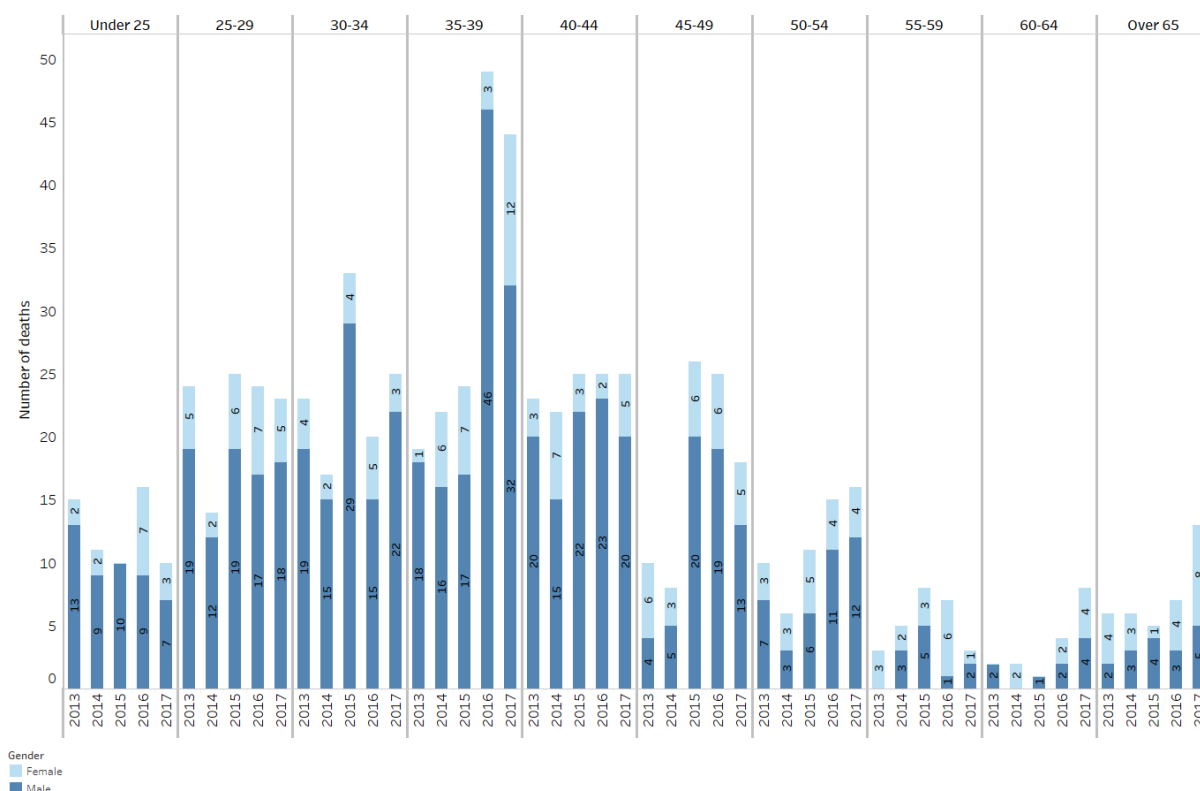
Source: Office for National Statistics, 2018

Chart 45: Number of drug poisoning and drug misuse deaths in Wales by year of registration 2008-17

³¹ Public Health Wales: Drug related deaths 2017. Available at: <http://www.wales.nhs.uk/sitesplus/documents/888/FINAL%20Drug%20related%20deaths%202017%20.pdf>

16.2 Drug misuse deaths by sex and age group

As shown in Chart 46, the proportion of deaths amongst those aged under 30 have decreased over the last 5 years, from 28.9 per cent in 2013 to 17.8 per cent in 2017. However, the proportion of deaths amongst the over 60s has increased from 5.9 per cent to 11.4 per cent of all drug poisoning deaths. As with previous years there were more deaths in 2017 involving males than those involving females, although amongst those aged 50 years and older, the number of deaths decreases and the proportion of male to female deaths becomes closer. Females who died from drug misuse tend to be older than males.



Source: Office for National Statistics, 2018

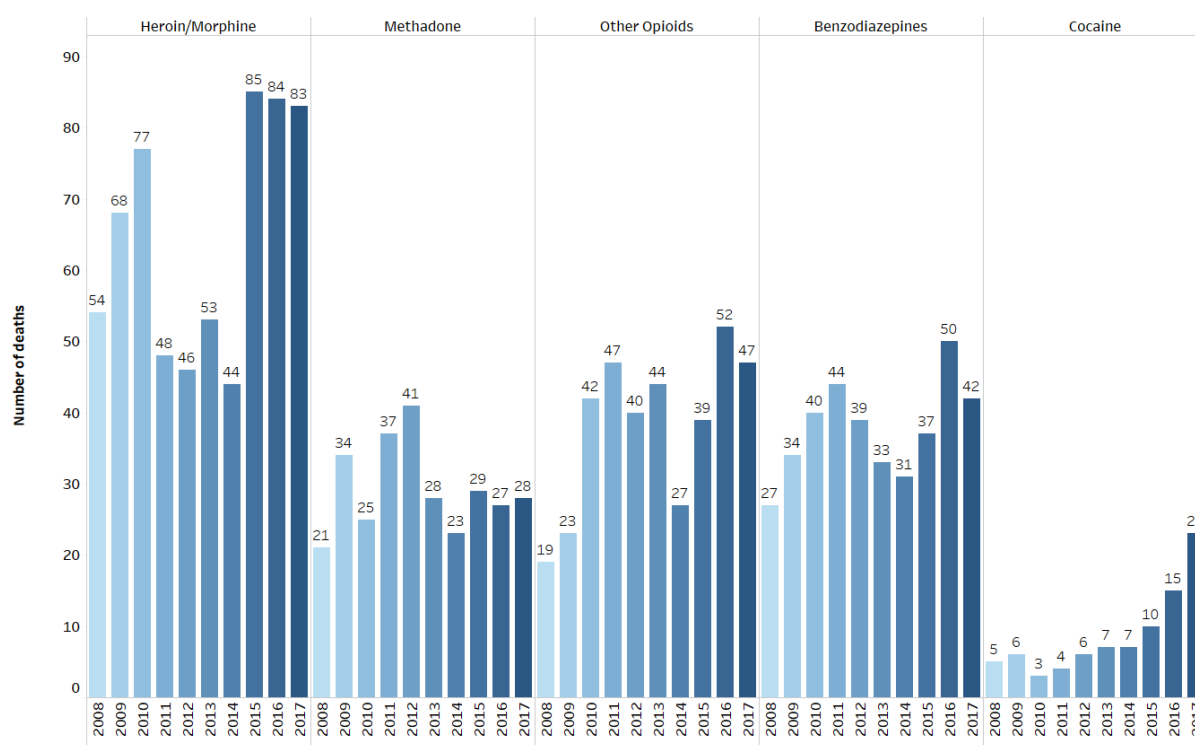
Chart 46: Number of drug misuse deaths in Wales by 5-year age band and sex for deaths registered in 2013-2017.

16.3 Drug misuse 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 one death may be represented in relation to more than one substance.

Deaths involving opioids remain by far the most common substance groups in relation to drug misuse deaths, with the most common being those involving heroin/morphine as shown in Chart 47. The number of deaths involving heroin/morphine in 2017 remains consistent with the previous years, since rising substantially from 44 to 85 deaths between 2014 and 2015. In 2017, there were 70 non-heroin / morphine opioid related deaths reported. The most common opioid other than heroin / morphine was methadone with 28 deaths.

The number of deaths involving cocaine has increased year on year from 5 in 2008 to 23 in 2017. The number of deaths involving New Psychoactive Substances has dropped from a peak of eight in 2015 to 2 deaths in 2017.



Source: Office for National Statistics, 2018

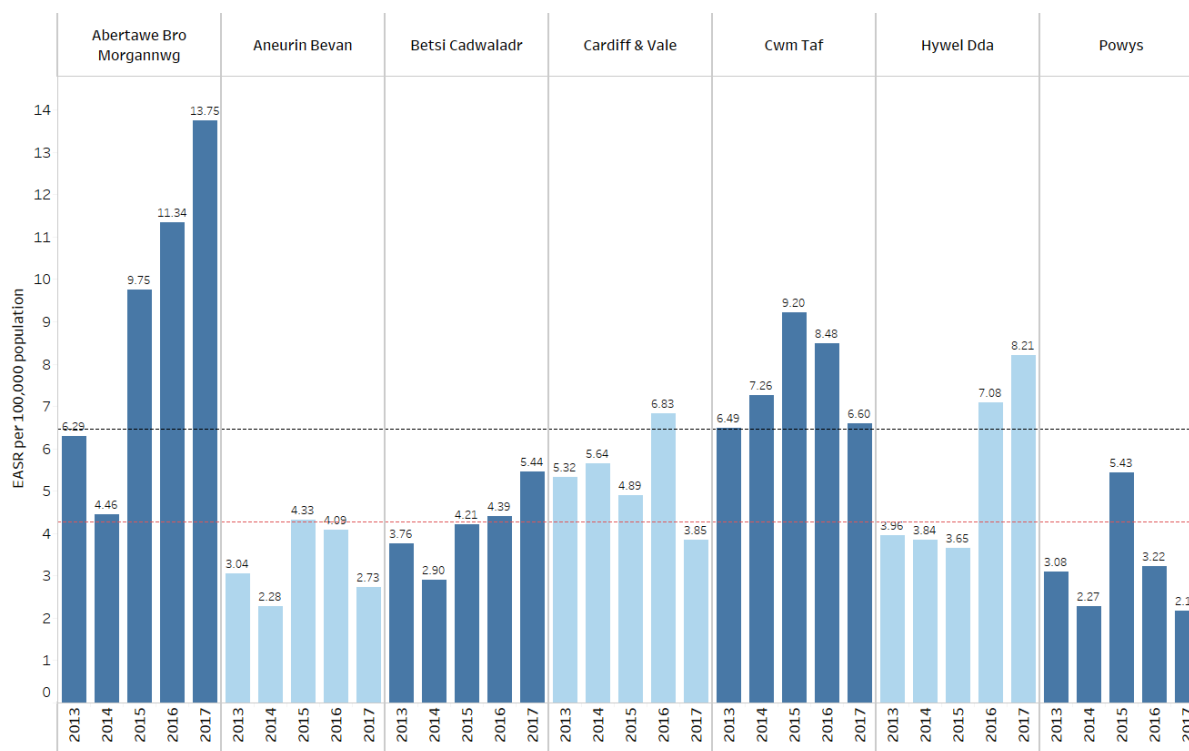
Chart 47: Number of drug misuse deaths in Wales in which selected substances were recorded, deaths registered 2008-2017.

16.4 Drug misuse deaths by Health Board area

The European age standardised rate (EASR) for drug misuse deaths registered in 2017 in Wales was 6.5 per 100,000 population compared with 6.7 deaths per 100,000 population in 2016. Rates varied substantially across health board areas with Abertawe Bro Morgannwg University (ABMU) Health Board recording the highest rate at 13.7 deaths per 100,000 population in 2017, a rise in rate of 2.4 deaths per 100,000 population as shown in Chart 48. Alongside ABMU, substantial increases in rates have been observed in Hywel Dda over the last two years, rising from 3.7 deaths per 100,000 population in 2015 to 8.2 deaths per 100,000 population in 2017.

The rate of drug misuse deaths in Wales (6.5 deaths per 100,000 population) remains higher than deaths recorded in England (4.3 deaths per 100,000 population).³²

³² Office for National Statistics. 2018. Deaths related to drug poisoning in England and Wales: 2017 registrations. Available at: <https://www.ons.gov.uk/releases/deathsrelatedtodrugpoisoninginenglandandwales2017registrations>

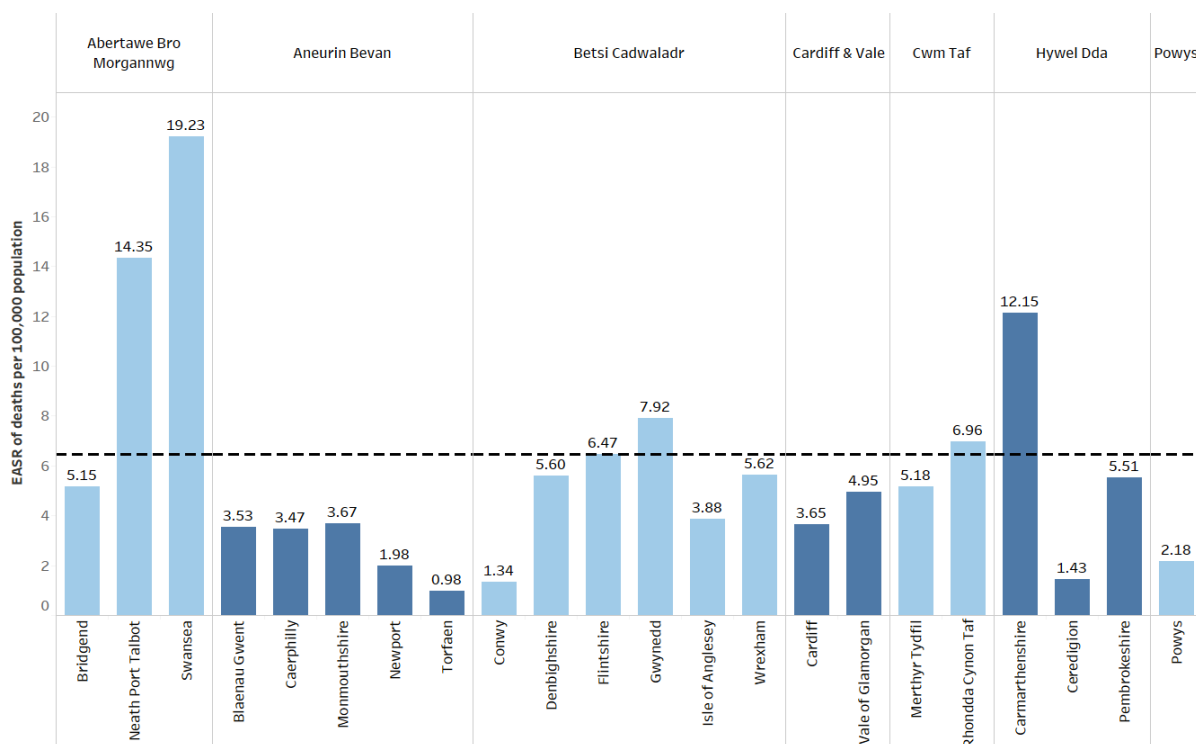


Source: Office for National Statistics, 2018

Chart 48: European Age Standardised Rate per 100,000 population of drug misuse deaths in Wales, by Health Board area 2013 - 2017, along with the 2017 national rates for Wales (black) and England (red).

As the figures presented in the previous subsections suggest, greater numbers of deaths involving heroin/morphine and other opioids has driven the increase in rates over the last 3 years. The highest rates of deaths from heroin and morphine were observed in ABMU, which recorded 7.7 deaths per 100,000 population, up 126.5 per cent over the last 5 years.

Chart 49 shows the EASR per 100,000 population for 2017 by local authority and illustrates the geographical variation in drug misuse deaths. Over this period, Neath Port Talbot and Swansea had the highest EASR at 14.35 and 19.23 drug misuse deaths per 100,000 population respectively. The lowest number of deaths were recorded in Torfaen and Ceredigion, which both recorded a single death in 2017. These figures, alongside those for Health Board areas above demonstrate that there are complex patterns across areas over time in relation to drug misuse deaths.



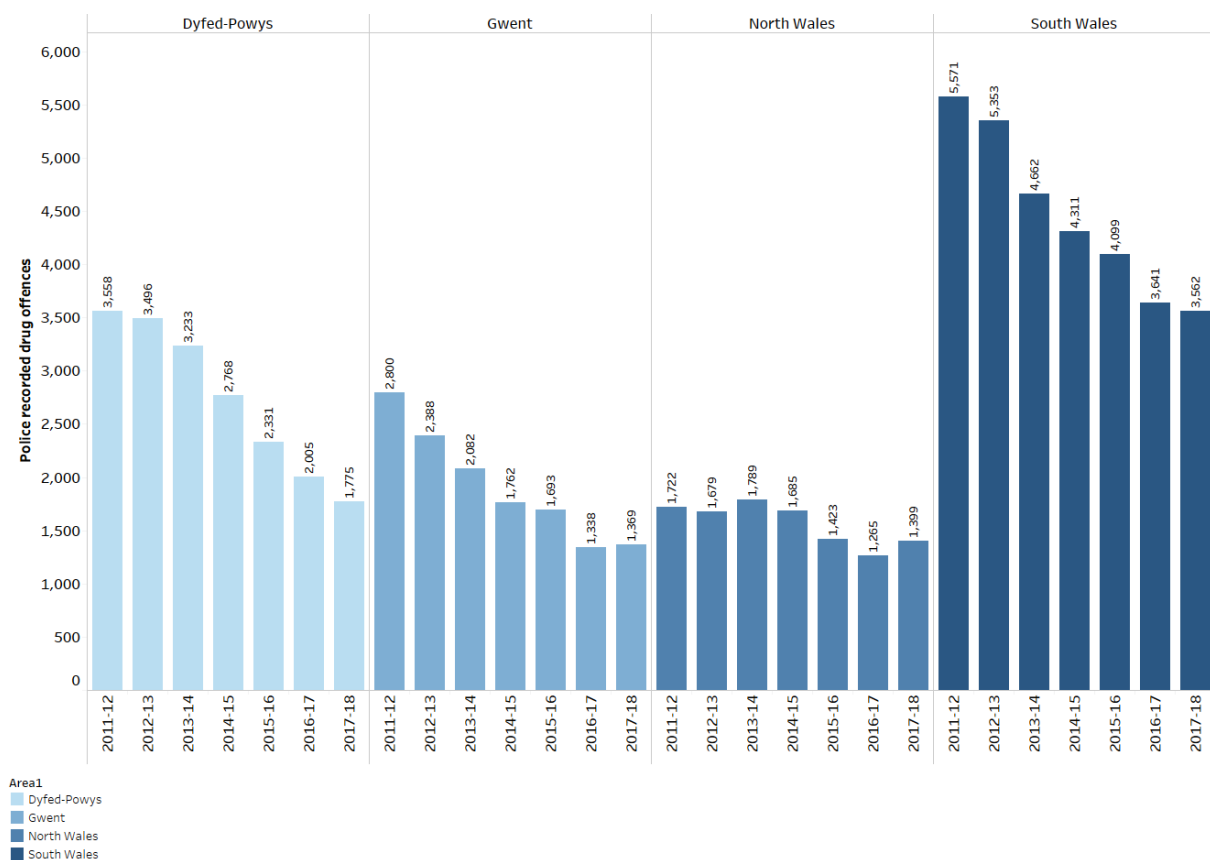
Source: Office for National Statistics, 2018

Chart 49: European age standardised rate per 100,000 population of deaths from drug misuse registered in Wales 2017, by local authority.

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 8,105 drugs offences in Wales in 2017-18, a fall of 3.8 per cent compared with 2016-17. As in previous years, South Wales recorded the greatest number of drug offences. The lowest number of drug offences was recorded in Gwent. Dyfed Powys observed the largest decrease of 11.5 per cent from the previous year. The number of drug offences recorded by Welsh police forces for the five years to 2017-18 is shown in Chart 50.³³

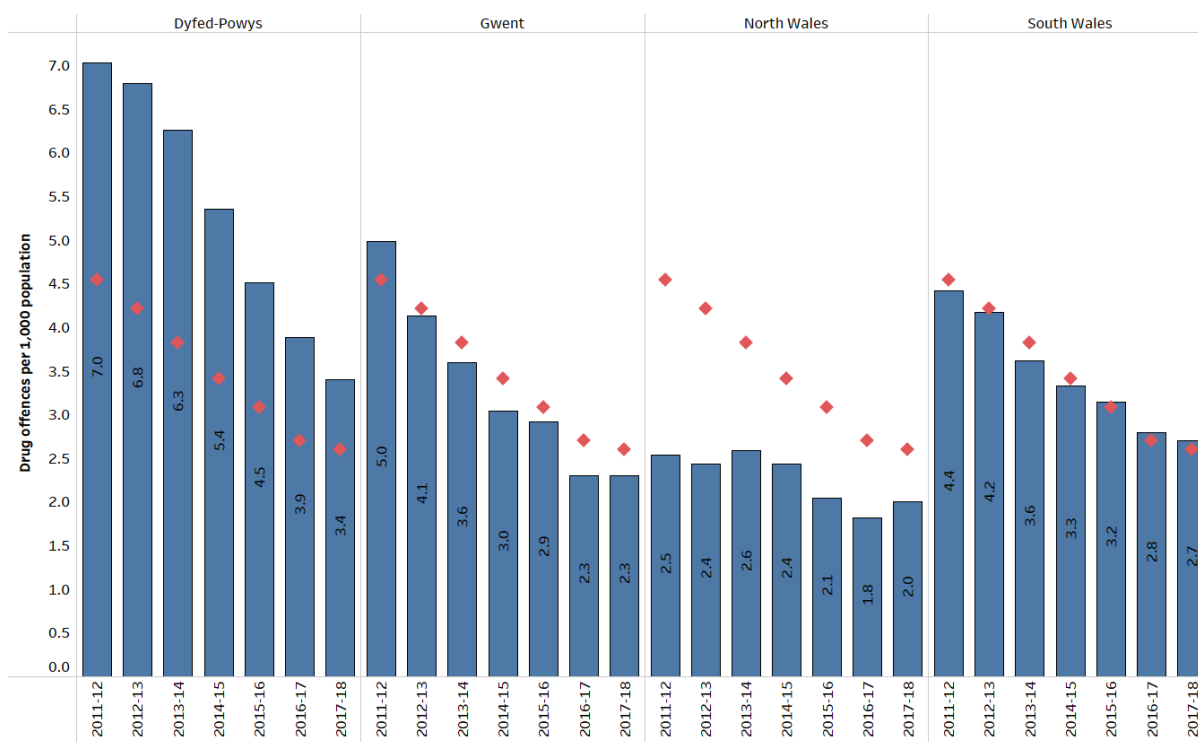


Source: Office for National Statistics, 2018

Chart 50: Number of drug offences recorded by police forces in Wales by year and police force, 2011-12 to 2017-18.

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 2017-18, the highest rate per 1,000 population of drug offences was recorded in Dyfed Powys, with 3.4 drug offences recorded per 1,000 residents, down from 3.9 per 1,000 the previous year. The lowest rate was recorded in North Wales, with 2.0 offences per 1,000 population. The overall rate of recorded drugs offences for Wales was 2.6 per 1,000 population. The rate of police recorded crimes by year and police force area for Wales is shown in Chart 51.

³³ The data for police activity in Wales was sourced from the Office for National Statistics and is available at <https://www.ons.gov.uk/peoplepopulationandcommunity/crimeandjustice>.



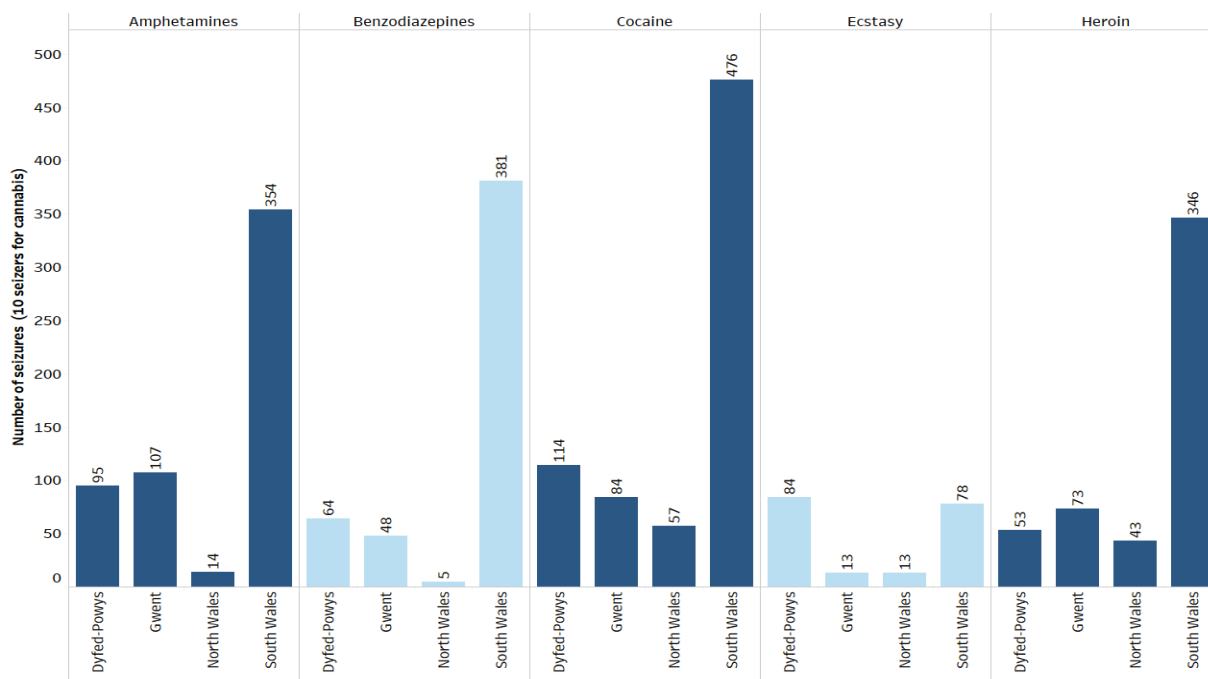
Source: Office for National Statistics, 2018

Chart 51: Rate per 1,000 population of drug offences recorded by police forces in Wales by year and police force, 2011-12 to 2017-18, with the Wales average rate (red dot).

17.2 Seizures of illicit drugs in Wales

There were 7,759 seizures of illicit drugs by police forces in Wales in 2016-17, the most recent year for which data are available, a fall of 15.9 per cent compared with 2015-16. This represents an average of 2.5 seizures per 1,000 population in Wales, a decrease from 3.0 per 1,000 population the previous year. The majority, 71.1 per cent, of seizures involved cannabis with a further 9.4 per cent of all seizures accounted for by cocaine with 731 seizures, 7.4 per cent amphetamines and 6.6 per cent heroin.

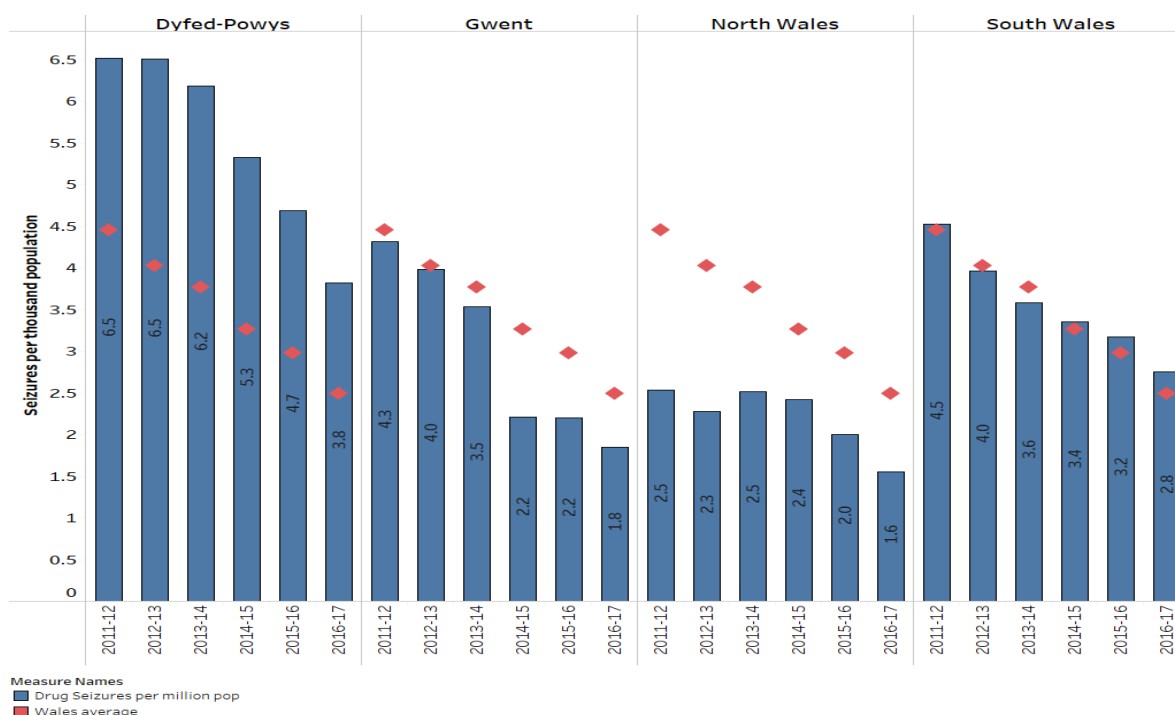
South Wales Police accounted for 46.7 per cent of all seizures, an increase of 1.1 percentage points on the previous year. South Wales Police also recorded higher proportions of seizures of class A drugs including 67.2 per cent of all heroin seizures and 65.1 per cent of all cocaine seizures in 2016-17. Wales has accounted for between 5.7 and 6.3 per cent of all drug seizures in the UK since 2006-07, with 5.9 per cent of UK seizures occurring in Wales in 2016-17. The number of seizures recorded by police force for selected drugs is shown in Chart 52.



Source: Home Office, 2018

Chart 52: Number of seizures by Welsh police forces, 2016-17, selected drugs.

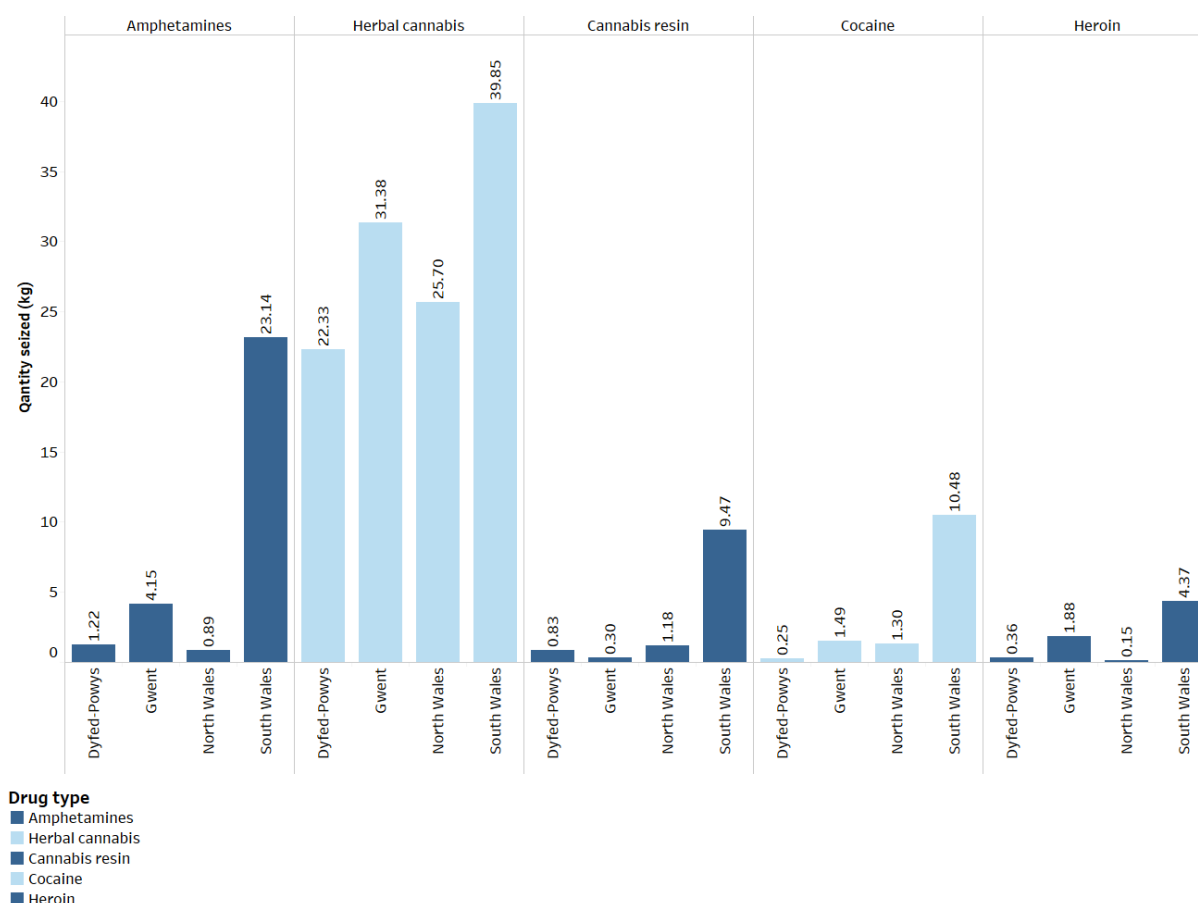
Differences in the rate of seizures between police forces in Wales mirror differences in the number of recorded drug offences, with Dyfed-Powys recording the highest rate of seizures and the North Wales forces recording the lowest rates. Chart 53 shows the rate of seizures per 1,000 population for each of the four Welsh police forces and the Wales average between 2011-12 and 2016-17.



Source: Home Office, 2018

Chart 53: Rate of seizures of illicit drugs by police forces in Wales per 1,000 population, by police force and Wales average (red dot), 2011-12 to 2016-17.

The quantity of illicit drugs seized is reported in kilograms for some drugs and doses for others. Across Wales, cannabis was seized in greater quantities than any other illicit drug, with 119.27 kg of herbal cannabis and 11.8 kg of cannabis resin seized in 2016-17, a decrease of 18.4 per cent on the previous year. After cannabis, the illicit drugs seized in the greatest quantities by weight in Wales in 2016-17 were amphetamines, 29.30 kg, down from 44.41 kg in 2015-16. Chart 54 shows the quantity of selected drugs seized by police forces in Wales in 2016-17.



Source: Home Office, 2018

Chart 54: Quantity (Kg) of illicit drugs seized by Welsh police forces, 2016-17, selected drugs

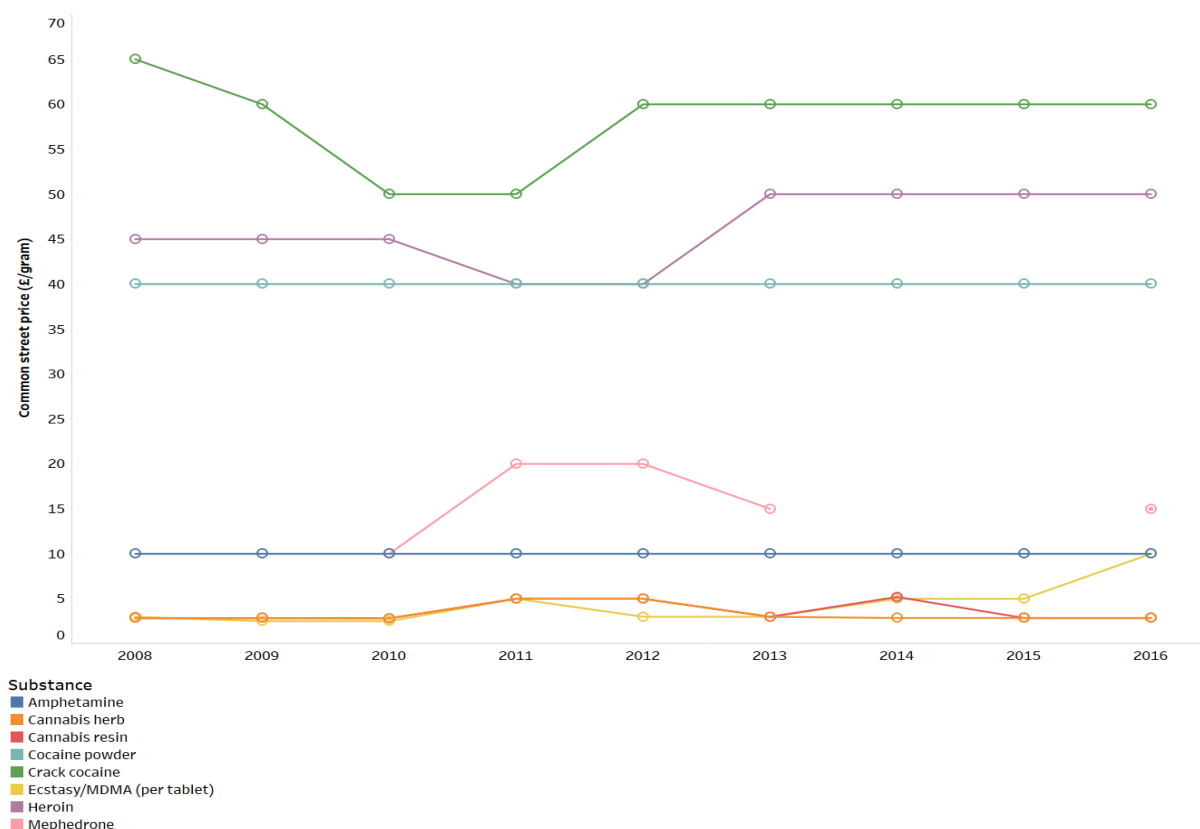
For illicit drug seizures measured by dose, benzodiazepines accounted, by a considerable margin, for most drugs seized with over 362,000 doses seized in 2016-17, an increase of 340 per cent from 2015-16. Of all benzodiazepine doses seized in England and Wales, 63.8 per cent were seized in Wales. This was largely driven by South Wales police, with 4 separate seizures of over 30,000 doses.³⁴

Anabolic steroids were the next most commonly seized substance in 2016-17 with 126,000 doses, 68.1 per cent of all seizures in England and Wales, followed by ecstasy with 7,800 doses seized, a decrease of 41.8 per cent on the previous year.

³⁴Home office 2017 : Seizures of drug in England and Wales, financial year ending 2017. Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/657872/seizures-drugs-mar2017-hosb2217.pdf

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).³⁵ 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. Chart 55 shows the typical street prices of selected illicit drugs in the UK to 2016, the most recent year for which data are available.



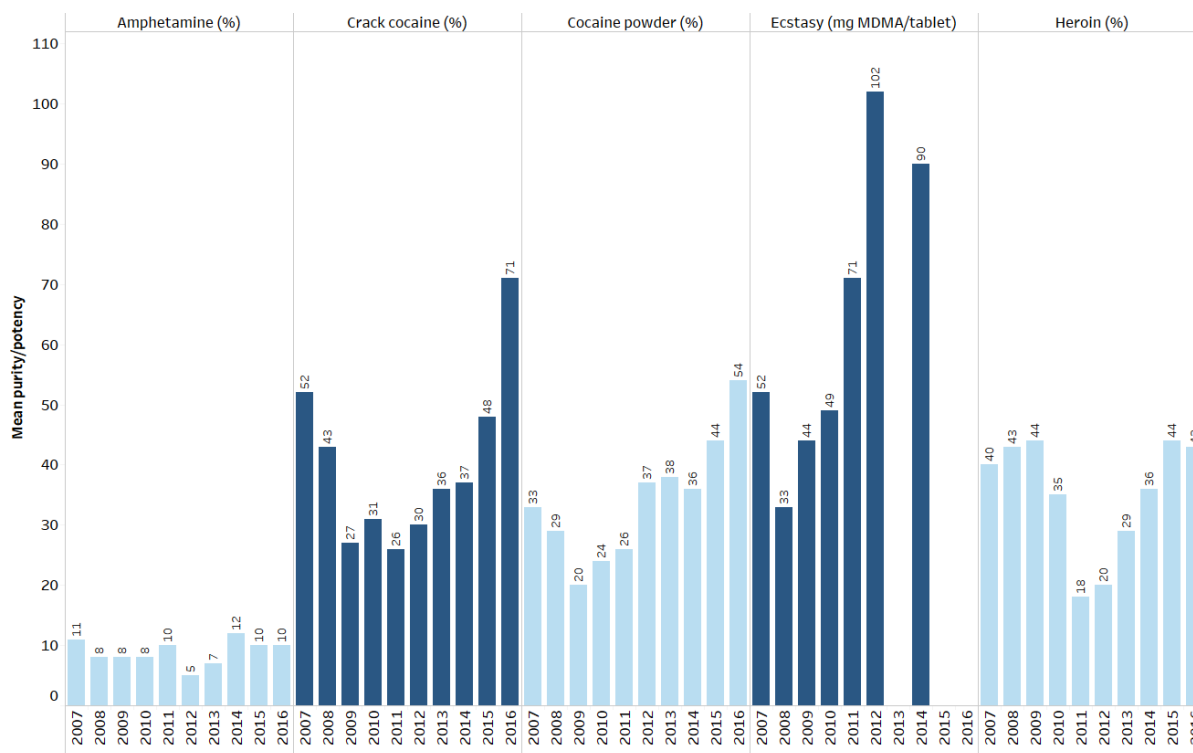
Source: UK Focal Point, 2018

Chart 55: Typical street price of selected illicit drugs based on law enforcement agency reports, UK, 2008-16³⁶.

Data for the UK suggests that drug prices have remained relatively stable in recent years.

³⁵ UK Focal Point annual reports are available at <http://www.nta.nhs.uk/focalpoint.aspx>

³⁶ Data for Mephedrone was not available for 2013 to 2015.



Source: National Crime Agency, 2017

Chart 56: Mean percentage purity of small quantity drug seizures in England and Wales, 2008-16, by selected drugs³⁷.

As shown in Chart 56, the purity of both cocaine and crack cocaine have been increasing since 2009 and are at the highest purity levels seen in the last 10 years. The purity of heroin has remained consistent with the previous year, and is 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 Focal point report, evidence from WEDINOS suggests that purity of MDMA tablets remains high.³⁸

³⁷ Data for MDMA was not available for 2013, 2015 and 2016.

³⁸ WEDINOS (2018) Philtre annual report, 2017-18. Public Health Wales. Available at: <http://www.wedinos.org/newsletter.html>

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 ³⁹ and adopted by Public Health England ⁴⁰ . 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.
'Specific' or 'attributable'	'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

³⁹ 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>, viewed 02.09.16

⁴⁰ Public Health England (2015) Local Alcohol Profiles for England 2015 user guide. http://www.lape.org.uk/downloads/LAPE%20User%20Guide_Final.pdf, viewed 02.09.16

	<p>estimated that alcohol plays a causative role in 25-33 per cent of cardiac arrhythmias, with the proportion varying by sex and age⁴¹. Some external cause codes also have an alcohol-attributable fraction: it has been estimated that 27 per cent of assaults are alcohol-related⁴¹. 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 NWIS 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>
Diagnostic position	<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> <p>Also, see below for interactions between diagnostic position and person/episode-based figures.</p>
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</p>

⁴¹ 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/> viewed 02.09.16

	<p>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>
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There is a wide range of technical considerations relating to the development of measures over time and the methods of extracting and analyzing 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 alcohol level*	Y90
Evidence of alcohol involvement determined by level of intoxication*	Y91
*Codes added to list of alcohol-specific conditions in 2013	
Partially alcohol-attributable conditions	
Chronic conditions	
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, J18
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> <p>"Bad trips" (drugs) Drunkenness NOS Pathological intoxication</p> <p>Trance and possession disorders in psychoactive substance intoxication</p> <p>Excludes: <i>intoxication meaning poisoning</i></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</p>

	<p>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>Amnestic disorder, alcohol- or drug-induced Korsakov's psychosis or syndrome, alcohol- or other psychoactive substance-induced or unspecified</p> <p>Excludes: <i>nonalcoholic Korsakov's psychosis or syndrome (F04)</i></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	Other mental and behavioural disorders
Fxx9	Unspecified mental and behavioural disorder

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 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. NWIS 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. 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 3:⁴²

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 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.

⁴² 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

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 3⁴³:

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.

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>.

⁴³ 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

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 cannabis⁴⁴.

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 thus formally accounting for model uncertainty within the population estimate⁴⁵. The figures presented in this report are those derived from applying Bayesian techniques to the data.

⁴⁴ EMCDDA (2010), Statistical bulletin 2010: Problem drug use indicator – overview. Lisbon, EMCDDA <http://www.emcdda.europa.eu/www/advancedsearch.cfm>

⁴⁵ 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