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SUBSTANCE MISUSE PROGRAMME



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READING BETWEEN THE LINES:
The annual profile for substance misuse
2014-15

**Annual statistical report on alcohol and drug use on health, social
care and education services in Wales through the life course**

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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Published by Public Health Wales, Cardiff. UK. October 2015

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I. Introduction

This statistical report provides a summary of routinely-reported substance misuse related evidence currently available in Wales. Evidence is drawn from a number of data sources including information from the Patient Episode Database Wales (PEDW), the Harm Reduction Database (HRD) Wales, Office for National Statistics (ONS) information, Education, and Home Office data. This report is intended for use alongside the Welsh Government Substance Misuse report on treatment activity for the same period to provide a complete profile on the scale and nature of substance misuse, both drug and alcohol use, 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.

The report also includes a wider range of measures than in previous years, reflecting the most recent developments in contemporary research on substance misuse. Notably, these additional measures include alcohol attributable admissions to general hospitals, a measure which includes conditions which evidence suggests are partially due to alcohol consumption when considered across the whole population. This measure, presented alongside data on alcohol specific admissions (i.e. those conditions which are solely due to alcohol) allows for a more detailed and nuanced understanding of the health harms caused by alcohol. Further details on alcohol attributable and alcohol specific measures are given in the text and the Appendices.

Within section I, the report presents population based data relating to self-report 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. Unlike previous years, all hospitals admissions data presented in this report show admissions for conditions in any diagnostic position, except where specified in the text and five years data is presented to avoid comparison with previous reports. 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 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

- Reported alcohol consumption above recommended guidelines has fallen between 2008-09 and 2013-14, from 44.2 per cent to 41.1 per cent of the Welsh population.
- In Wales in 2014, decreases were seen both in the number of individual patients admitted to hospital for alcohol specific condition and for conditions with a named illicit drug, by 4.6 per cent and 3.4 per cent respectively compared with 2013-14
- Assessments within specialist substance misuse treatment services with new individuals (first presentation at treatment services) increased by 13.9 per cent
- Alcohol related deaths decreased by 1.7 per cent to 459 deaths in 2014
- The decreases in drug deaths mean that the standardised rate for deaths by drug misuse in Wales in 2014 (3.90 deaths per 100,000 population) was lower than that for England (3.97 per 100,000) for the first time since 2004¹.

Children and young people (0-24 years)

- There were 5,120 cases of children in need registered with local authorities at 31 March 2014¹⁰ due to parental substance misuse, a 3.7 per cent increase from 2013.
- With the exception of a small (1.3 per cent) rise between 2012-13 and 2013-14, the number of young people admitted to hospital with alcohol specific conditions has fallen by a third since 2010-11
- The most frequently reported substance involved in hospital admissions for young people was cannabinoids (252 admissions, a rise of 8.6 per cent on 2013-14) followed by opioids (179, down 10.9 per cent)

Working aged adults (25-49 years)

- Since 2010-11, the number of individuals admitted to hospital with an alcohol specific condition has fallen by 12.1 per cent in females and 13.5 per cent in males within this age group
- Opioids continued to account for considerably more admissions than any other substance, with 1,338 admissions (46 per cent of all admissions for this age group).
- 64.8 per cent of all assessments within specialist substance misuse treatment services were recorded in this age group, 67.8 per cent were male, representing an increase of 9.8 per cent from 2013-14

Older people (Aged 50 years and above)

- 2014-15 was the third consecutive year in which hospital admissions for alcohol specific conditions increased in this age group, with a 3.3 per cent increase on the previous year.
- In contrast to the two other age groups specified, hospital admissions involving named illicit drugs rose amongst those aged 50 years and over compared with 2013-14.
- The only group seeing consistent year on year increases in new presentations and assessments in specialist substance misuse services since 2012-13 is the 60+ age group

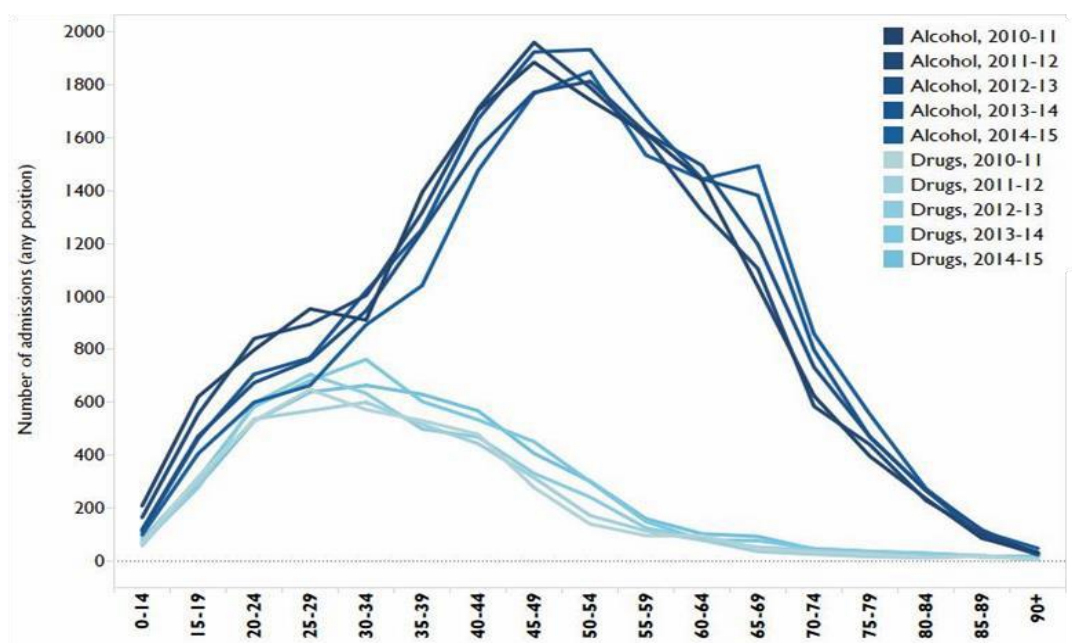
3. Headline population trends

3.1. Alcohol specific and illicit drug poisoning hospital admissions

One measure commonly used to describe the harms of alcohol and illicit drugs to individuals is hospital admissions. 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 Appendix I of this document.

Chart I shows the total number of hospital admissions over the most recent five years for alcohol specific conditions and named illicit drugs by age band. In 2014-15 there were slightly more than three times the number of admission for alcohol specific conditions (15,114) than for named illicit drugs (4,595).

It is also clear from Chart I that a stable pattern of admissions by age group is well established across the years, with admissions for illicit drugs slightly lagging alcohol specific admissions until the mid-20s age band, then steadily falling as age bands increase while alcohol specific admissions continue to rise until a peak at the 45-49 and 50-54 age bands. It is important to note that drug and alcohol users are not exclusive groups and as such individuals may present with both drug and alcohol health harms over the life course.



Source: Patient Episode Database for Wales, 2015

Chart I: Admissions for alcohol specific conditions and poisoning by named illicit drugs, by year and 5 year age band, Wales

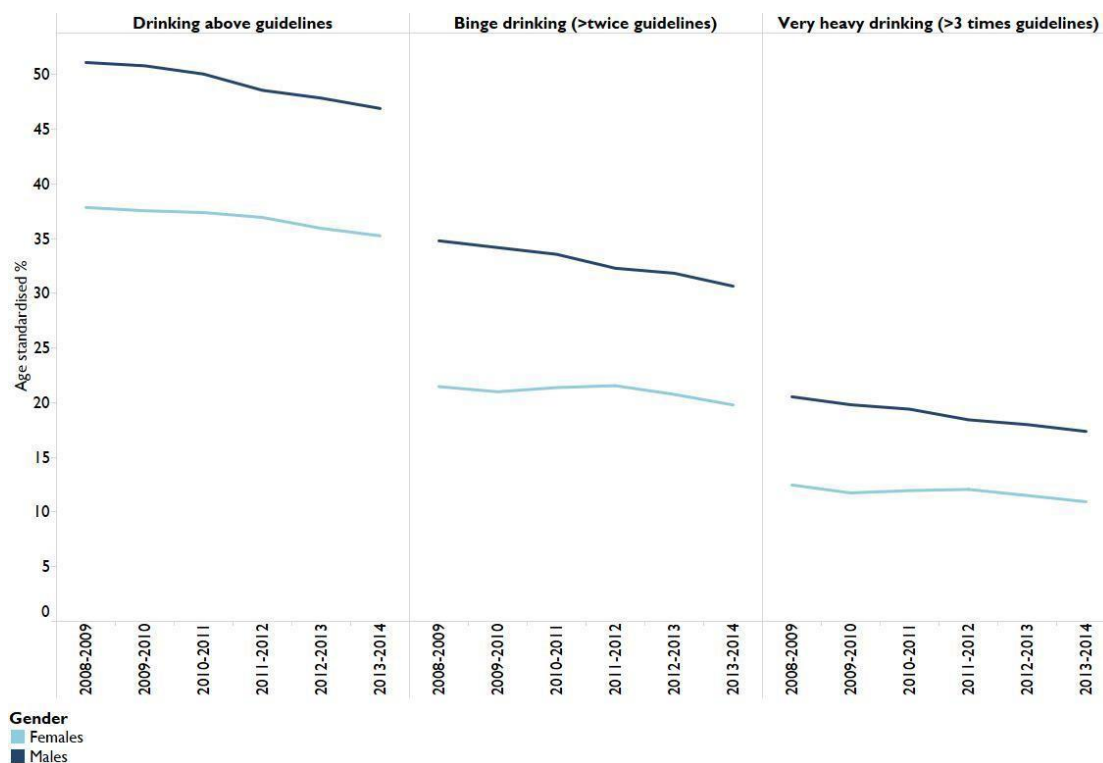
3.2. Self-reported alcohol consumption in relation to recommended guidelines

The Welsh Health Survey², and additional analysis of the findings by the Public Health Wales Observatory³ provides self-reported details of alcohol consumption which can be compared to recommended health guidelines. Guidelines suggest a maximum of 4 units of alcohol for men and 3 units for women per day. The Welsh Health Survey presents the proportion of the Welsh population (aged 16 years and over) reporting drinking 'above guidelines', 'binge drinking' (more than twice guidelines) and 'very heavy drinking' (more than three times guidelines) on their heaviest drinking day of the previous week.

Reported alcohol consumption above recommended guidelines has fallen between 2008-09 and 2013-14, from 44.2 per cent to 41.1 per cent of the Welsh population. The proportion of people reporting drinking at higher levels has also fallen over this period from 27.4 per cent reporting 'binge drinking' at least once per week in 2008-09 to 25.1 per cent in 2013-14 and 'very heavy drinking' down to 14 per cent from 16 per cent. Over these time periods, the falls are statistically significant, meaning they can be taken to reflect a real change in the population, rather than a chance observation. As shown in Chart 2, changes in reported alcohol consumption have been greater amongst men than women. The proportion of men reporting drinking above guidelines, binge drinking and very heavy drinking have each fallen by four percentage points over the period 2008-09, to 47 per cent, 31 per cent and 17 per cent respectively. The proportion of women reporting drinking at these levels in 2013-14 was 35 per cent, 20 per cent and 11 per cent respectively.

² See <http://gov.wales/statistics-and-research/welsh-health-survey/?lang=en> for details of the Welsh Health Survey and headline results

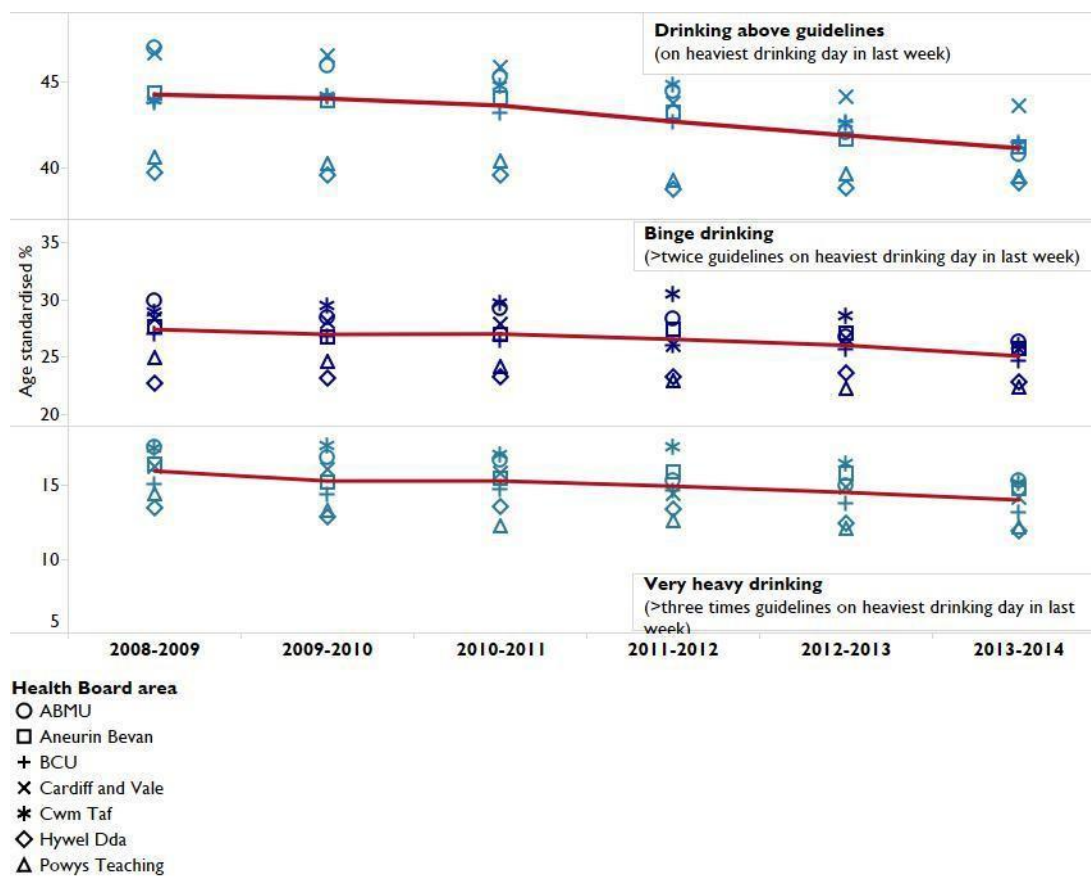
³ See <http://howis.wales.nhs.uk/sitesplus/922/page/64616> for full analysis of the figures by the Public Health Wales Observatory



Source: Welsh Health Survey, 2015
Public Health Wales Observatory, 2015

Chart 2: Age standardised percentages of 16+ population in Wales reporting drinking alcohol above guidelines, binge drinking and 'very heavy drinking', 2008-09 to 2014-15, by gender

Chart 3 shows reported drinking above guidelines, including 'binge' and 'very heavy' drinking by Health Board area in Wales. The highest percentage of those drinking above guidelines was found amongst residents of Cardiff and Vale, with 43.6 per cent, four and a half percentage points higher than the area with the lowest proportion of those drinking above guidelines (Hywel Dda, 39.1 per cent). Indeed, Powys Teaching and Hywel Dda showed the lowest proportion reporting 'above guidelines', 'binge' and 'very heavy' drinking. However, despite the rankings of Health Board areas remaining consistent between the 'binge' and 'very heavy drinking' categories, there was considerable difference between the order of Health Board areas in these categories when compared with 'drinking above guidelines'. Residents of ABMU reported the highest rates of both 'binge' and 'very heavy' drinking, with 26.3 per cent and 15.3 per cent respectively. The lowest reported proportion of 'binge' drinking was Powys Teaching (22.3) whilst Hywel Dda saw the lowest proportion of the 16+ population 'very heavy' drinking with 11.8 per cent.

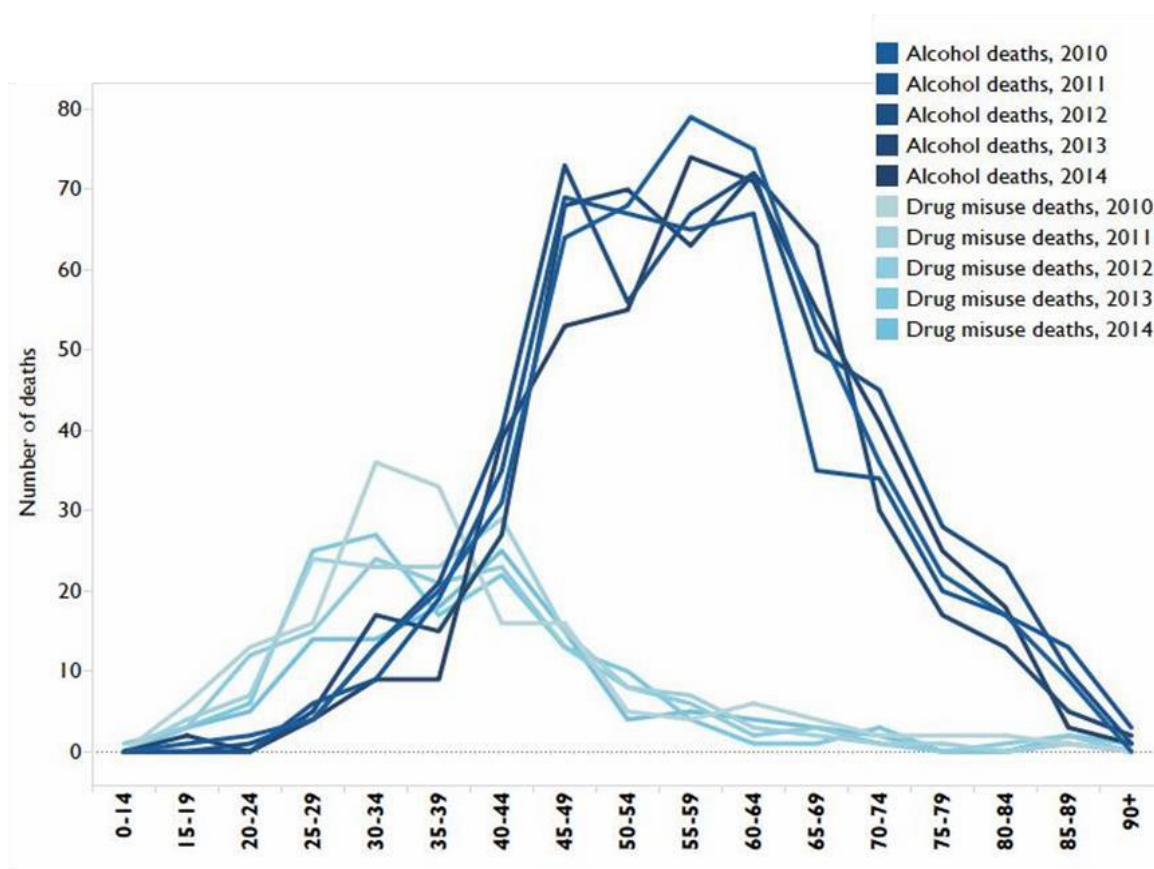


Sources Welsh Health Survey, 2015,
Public Health Wales Observatory, 2015

Chart 3: Age standardised percentages of 16+ population in Wales reporting drinking above guidelines, binge drinking and 'very heavy drinking', 2008-09 to 2014-15, by Health Board area. Wales average shown as red line.

3.3. Alcohol related deaths and deaths from drug misuse

As with the data presented for drug and alcohol hospital admissions in Section 3.1 above, plotting the data for alcohol and drug related deaths shows a steady increase for both measures particularly at around 20-24 years, as shown in Chart 4. However, whilst the number of drug deaths remains relatively stable up to 40-44 years and then steadily declines, alcohol related deaths continue to rise dramatically to a later peak (55-59 years old in 2014-15) with sustained higher rates of death over a wider age range than is seen with drug related deaths. More detailed analysis of drug and alcohol deaths is found in Sections 9 and 10.



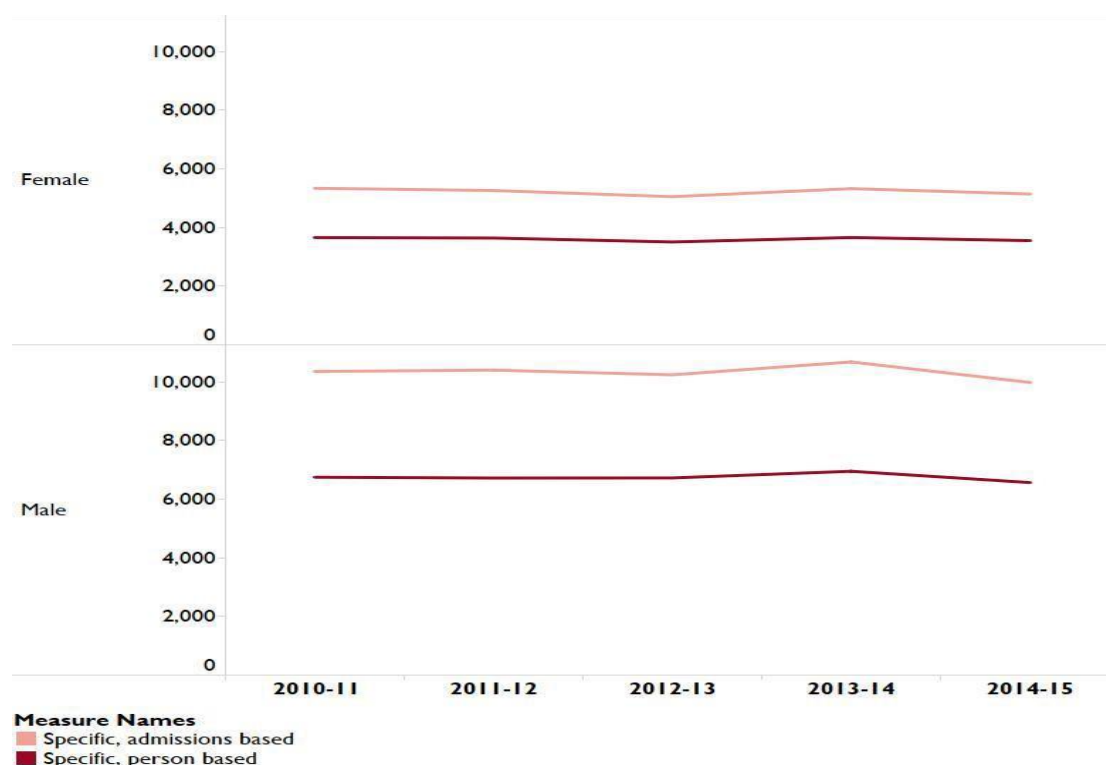
Source: Office for National Statistics, 2015

Chart 4: Deaths from alcohol specific conditions and deaths from drug misuse, by year and 5 year age band, Wales

3.4. 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 I for a more detailed description.

Chart 5 shows the number of individuals admitted and the total number of admissions for alcohol specific conditions (with an alcohol specific condition recorded anywhere on their admission record) over the most recent five years.



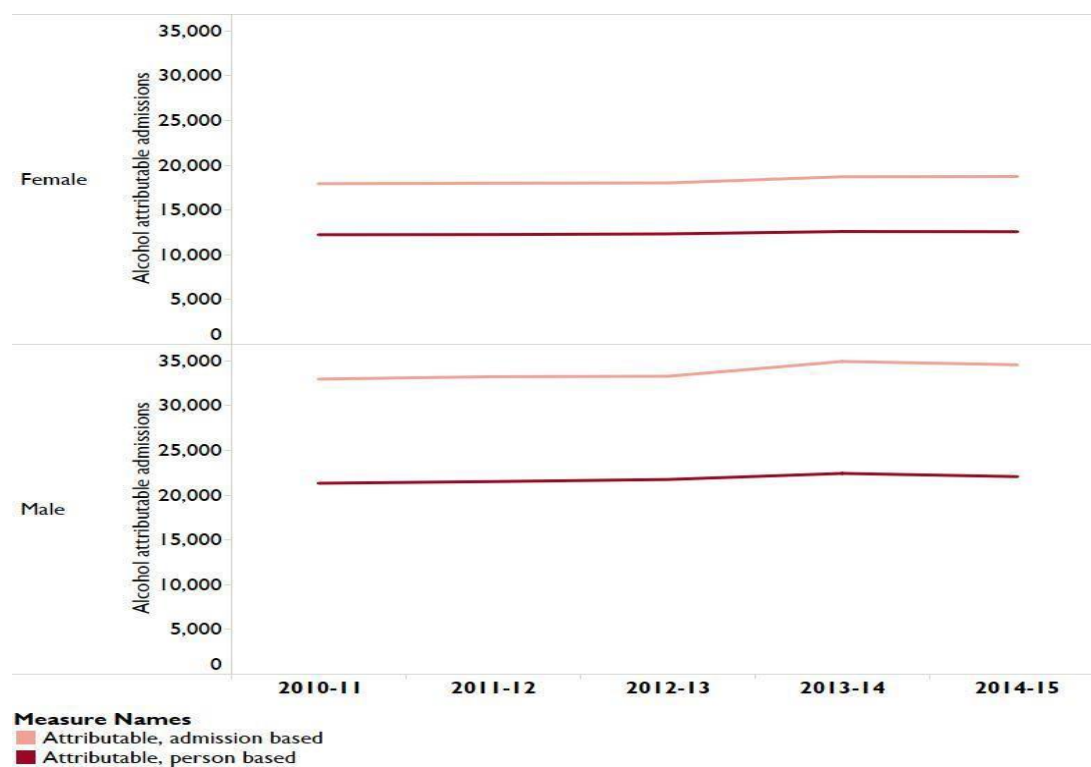
Source: Patient Episode Database for Wales, 2015

Chart 5: Alcohol specific admissions (any diagnostic position), person and admission based, by gender, 2010-11 to 2014-15

There were 15,114 alcohol specific admissions (any position) in Wales in 2014, relating to 10,112 individual patients. Men made up approximately two-thirds of the figure for individuals (64.9 per cent) and total admissions (66 per cent). The number of individual patients admitted fell by 491 compared with the previous year (4.6 per cent), whilst there were 882 fewer admissions in total, a 5.5 per cent fall. In both cases, the decreases were proportionately greater amongst men than women (5.5 per cent compared with 2.9 per cent for individual patients admitted; 6.5 per cent compared with 3.4 per cent for total admissions).

However, looking beyond these relatively small changes in admissions from the last year, no clear trend is observable in relation to alcohol specific admissions over time. Over the most recent five years, person based admissions and total admissions have risen and fallen in alternative years, with an overall fall of 2.8 per cent and 3.6 per cent respectively between 2010-11 and 2014-15.

Alcohol attributable figures, shown in Chart 6, have changed in slightly different ways when compared with figures for alcohol specific measures over time.



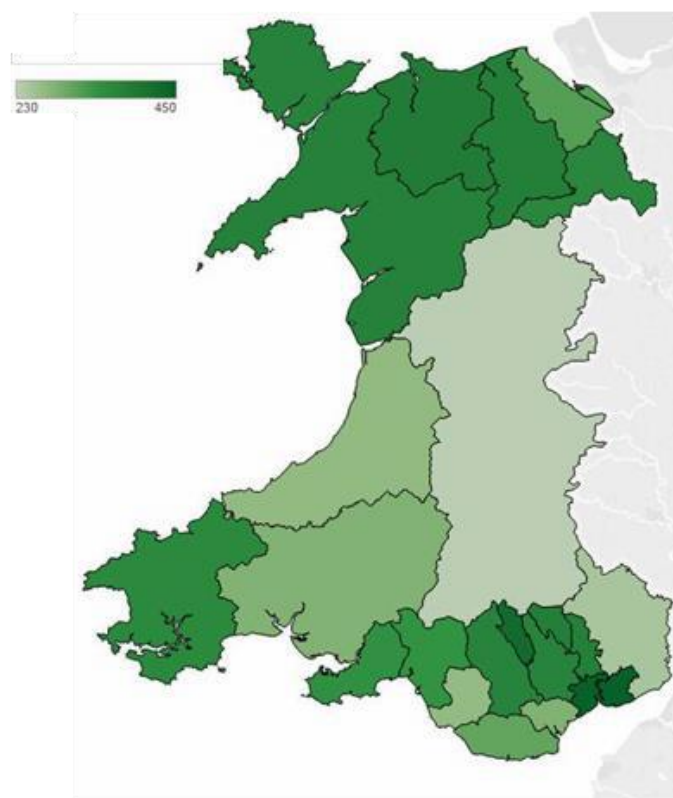
Source: Patient Episode Database for Wales, 2015

Chart 6: Alcohol attributable admissions (any position), person and admission based, by gender, Wales 2010-11 to 2014-15

In contrast to alcohol specific admissions, total alcohol attributable admissions have risen year on year with the exception of the most recent year when they fell very slightly to 34,649 for person based admissions (a fall of 1.1 per cent compared with 2013-14) and 53,314 for total admissions based figures (down 0.6 per cent). Across five years, person based alcohol attributable admissions rose by 3.2 per cent and total admissions rose 4.7 per cent in 2014-15 compared with 2010-11. Amongst men, the five-year increase was 3.5 per cent for person based admissions, whilst for women the increase was 2.8 per cent. The gender difference was less marked for total alcohol attributable admissions, with a five-year increase amongst men of 4.9 per cent compared with a 4.5 per cent increase amongst women. This data would indicate an increase in the health related harms associated with the consumption of alcohol in both males and females.

3.4.1 Alcohol related hospital admissions by local authority (residents) in Wales

Figure 1 shows age standardised rates of person based alcohol specific admissions by local authority in 2014-15. Because these figures have been age standardised, admissions can be compared between areas which have different populations and age structures.



Source: Patient Episode Database for Wales, 2015

Figure 1: Alcohol specific admissions, person based (any position) by Local Authority residents in Wales 2014-15, European Age Standardised Rate (EASR).

Newport was the local authority with the highest rate of individuals hospitalised with alcohol related conditions in 2014-15, with a standardised rate of 450 admissions per 100,000 population. This was almost twice as many as Powys which, with a standardised rate of 230, was the local authority with the lowest rate in Wales. The rate for Wales as a whole was 333 per 100,000 population, down 5.1 per cent on the previous year and 3.5 per cent compared with 2010-11. There was no clear pattern to age standardised rates of person-based alcohol specific admissions in terms of geography or demography.

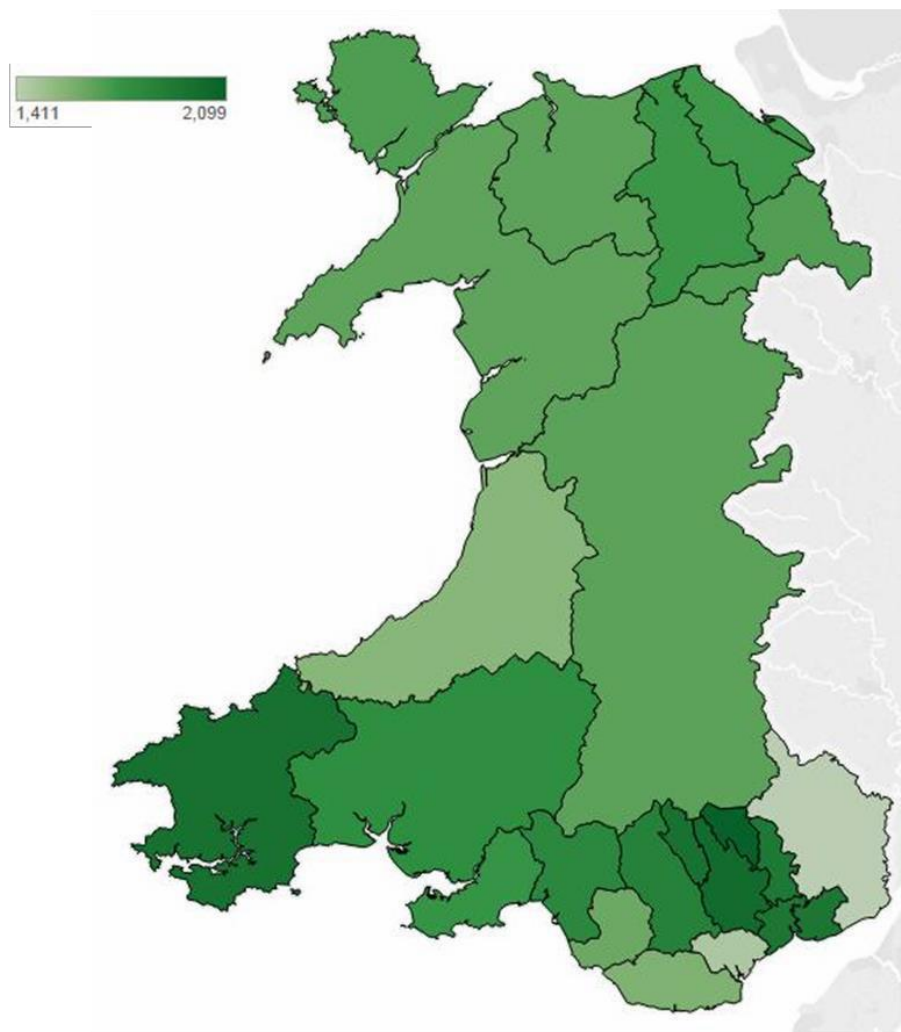
Changes were observed in the rates of person based alcohol specific admissions for 2014-15 compared with 2013-14 across different local authorities. Flintshire, Bridgend and Anglesey saw the largest falls (16.8 per cent, 15.3 per cent and 14.2 per cent respectively), whilst of the six local authorities recording an increase in admission rates over the previous period, Merthyr Tydfil (7.8 per cent), Carmarthenshire (7.6 per cent) and Ceredigion (6.8 per cent) saw the largest rises. It is not possible to state whether these changes were in any way related to the quality of data recording. The person based rate of alcohol specific admissions for 2014-15 by local authority is shown in Table 1.

Table 1: Alcohol specific admissions, person based, any position, EASR, by local authority, Wales 2014-15

Health Board	Local Authority	EASR, 2014/15	Change since 2013-14	Change since 2010-11
ABMU	Bridgend	265	-15.3%	-16.7%
	Neath Port Talbot	341	+1.5%	-11.2%
	Swansea	345	-2.5%	+7.1%
Aneurin Bevan	Blaenau Gwent	383	-2.8%	-12.4%
	Caerphilly	371	-4.4%	+9.1%
	Monmouthshire	247	-2.0%	-13.3%
	Newport	450	-0.7%	-2.2%
	Torfaen	380	+6.1%	-11.0%
BCU	Anglesey	375	-14.2%	-5.3%
	Conwy	389	-10.4%	-6.0%
	Denbighshire	383	-3.8%	-3.0%
	Flintshire	318	-16.8%	-2.5%
	Gwynedd	378	-10.2%	0.0%
	Wrexham	366	-9.9%	-10.3%
Cardiff and Vale	Cardiff	282	-12.7%	-19.4%
	Vale of Glamorgan	307	-8.9%	-8.6%
Cwm Taf	Merthyr Tydfil	428	+7.8%	+13.5%
	Rhondda Cynon Taf	371	+1.9%	+6.6%
Hywel Dda	Carmarthenshire	282	+7.6%	-5.7%
	Ceredigion	268	+6.8%	+44.9%
	Pembrokeshire	359	-10.7%	+5.3%
Powys Teaching	Powys	230	-3.4%	+6.5%
WALES	WALES	333	-5.1%	-3.5%

Source: Patient Episode Database for Wales, 2015

It is notable that when alcohol attributable admissions (any position) are considered, different patterns of change emerge. Monmouthshire (1,411 per 100,000), Cardiff (1,454) and Ceredigion (1,553) recorded the lowest rates of alcohol attributable hospital admissions, with Blaenau Gwent, Caerphilly and Pembrokeshire recording the highest rates, with 2,099, 2029 and 1985 admissions per 100,000 population respectively in 2014-15. The overall rate of total admissions for alcohol attributable conditions for Wales was 1,739, a rate 1.6 per cent higher than in 2013-14, and 1.5 per cent higher than in 2010-11. Figure 2 illustrates age standardised alcohol attributable admissions by Welsh local authority, while Table 2 includes changes in these rates over one and five years.



Source: Patient Episode Database for Wales, 2015

Figure 2: Alcohol attributable admissions (any position). 2014-15, European Age Standardised Rate

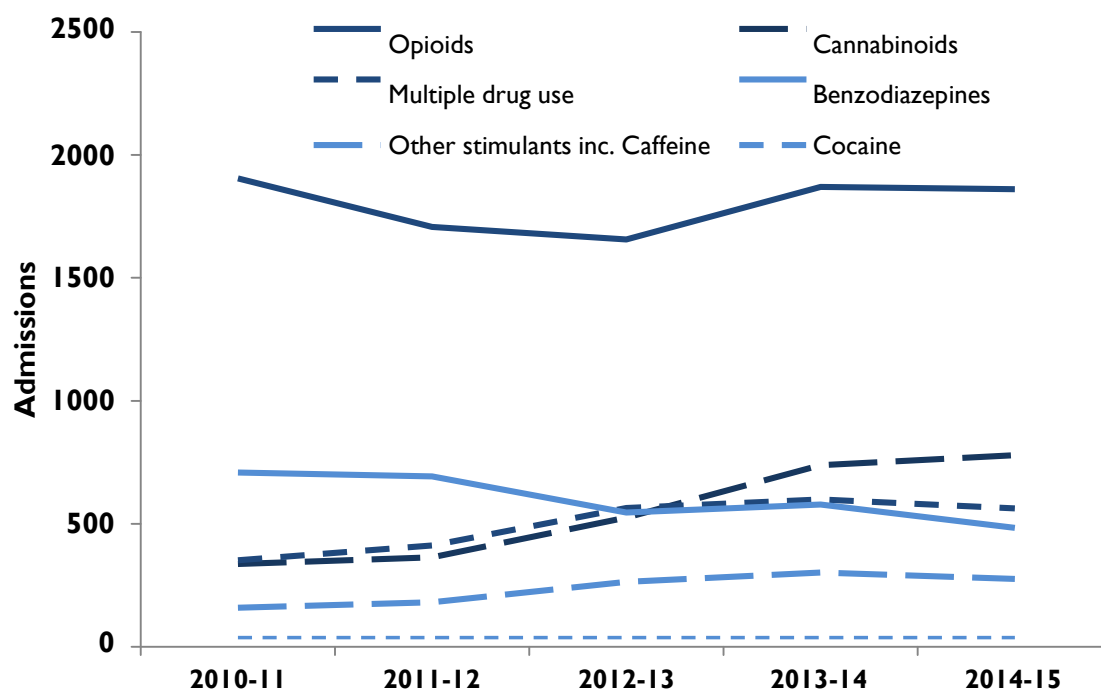
Table 2: Alcohol attributable admissions, all admissions, any position, EASR, by local authority, Wales 2014-15

Health Board	Local Authority	EASR, 2014/15	Change since 2013-14	Change since 2010-11
ABMU	Bridgend	1,628	-3.8%	3.7%
	Neath Port Talbot	1,829	2.1%	-1.1%
	Swansea	1,749	-1.6%	0.3%
Aneurin Bevan	Blaenau Gwent	2,099	-1.5%	-11.1%
	Caerphilly	2,029	-0.8%	5.6%
	Monmouthshire	1,411	-3.4%	-6.4%
	Newport	1,953	-0.4%	-4.1%
	Torfaen	1,933	0.8%	-9.4%
BCU	Anglesey	1,696	-5.3%	1.9%
	Conwy	1,665	-3.5%	-1.7%
	Denbighshire	1,738	-4.4%	0.2%
	Flintshire	1,727	-3.6%	2.6%
	Gwynedd	1,660	-2.9%	0.4%
	Wrexham	1,690	-6.4%	2.4%
Cardiff and Vale	Cardiff	1,454	-7.2%	-17.0%
	Vale of Glamorgan	1,577	-4.7%	-8.9%
Cwm Taf	Merthyr Tydfil	1,979	-2.4%	5.7%
	Rhondda Cynon Taf	1,870	-1.4%	10.5%
Hywel Dda	Carmarthenshire	1,784	4.0%	18.3%
	Ceredigion	1,553	3.9%	30.6%
	Pembrokeshire	1,985	2.0%	13.9%
Powys Teaching	Powys	1,667	2.8%	23.3%
WALES	WALES	1,739	-1.6%	1.5%

Source: Patient Episode Database for Wales, 2015

3.5. Hospital admissions involving use of named illicit drugs

There were 4,595 hospital admissions in Wales in 2014-15 in which an illicit drug was named in any diagnostic position, involving 3,878 individuals.⁴ This represents a fall of 3.4 per cent in the number of total admissions and 5.5 per cent in relation to person based admission compared with 2013-14. Chart 7 shows the number of admissions for selected illicit substances over the past five years in Wales.



Source: Patient Episode Database for Wales, 2015

Chart 7: Hospital admissions for poisoning with a named illicit drug, any diagnostic position, most frequently reported substances, Wales 2010-11, all persons

Whilst admissions fell between 2013-14 and 2014-15, there was considerable variation in admissions for different substances. Substantial decreases were recorded in the number of admissions for benzodiazepines (482 in 2014-15, a fall of 16.5 per cent) and there was a very marginal decrease in admissions involving opioids (down 0.6 per cent in 2014-15, with 1,860 admissions). These decreases can be contrasted with rises in admissions involving cocaine (148 admissions, up 1.4 per cent) and cannabinoids (778 admissions, up 5.6 per cent).

⁴ N.B. admissions are based on the number of times a substance was recorded anywhere on an admission record, therefore, where a substance was recorded twice on a single record they are counted twice; see Appendix 3 for detailed definitions of this indicator

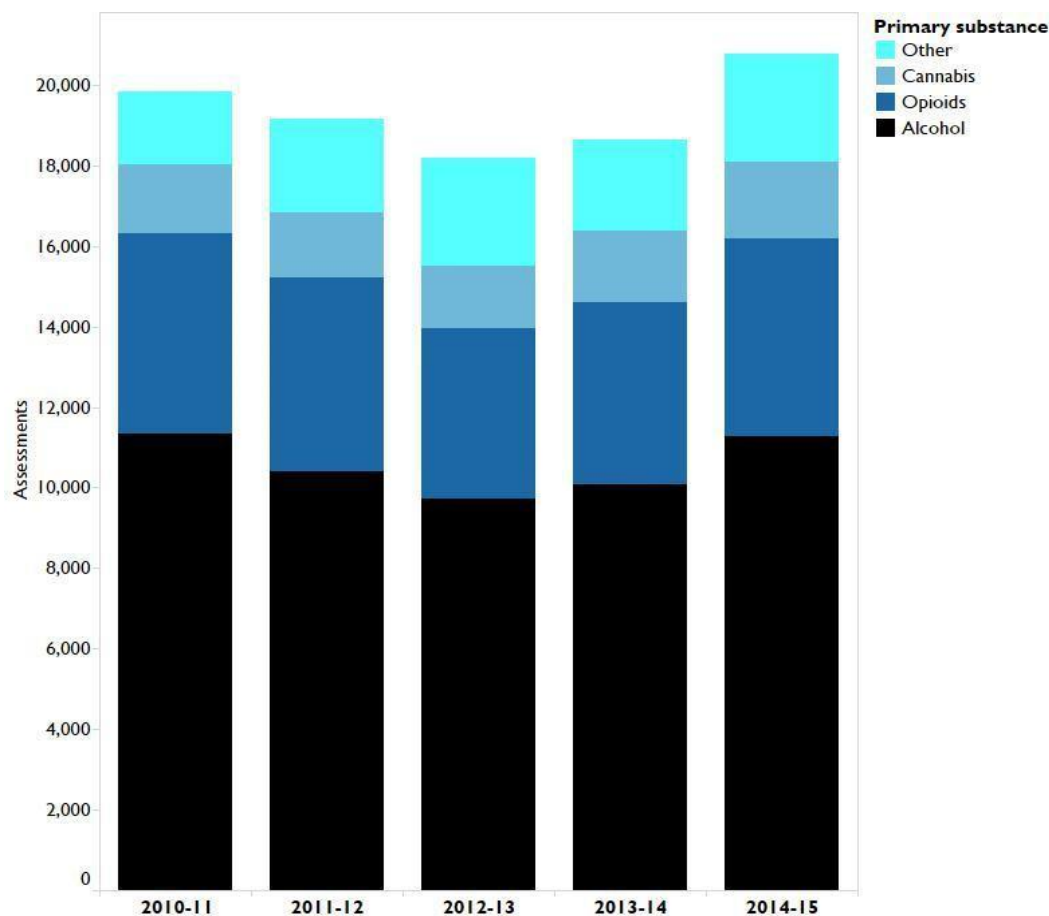
Whilst it is challenging to establish clear trends in problematic use across all substances in a given period, this becomes even more difficult when considered across time. Overall admissions involving named illicit drugs have fallen slightly in 2014-15, but this fall should be seen in the context of substantial year on year rises over the previous two years and compared with 2010-11, the number of admissions involving named illicit drugs has increased 17.8 per cent.

Over the last five years (2010-11 to 2014-15), admissions involving opioids have fallen by 2.4 per cent and admissions for benzodiazepines have fallen by 31.8 per cent. For cocaine, there was a five-year rise of 14.7 per cent in admissions, whilst admissions involving cannabinoids more than doubled from 335 in 2010-11; a rise of 132.2 per cent. In relation to admissions for cannabinoids, it is not possible to clarify the proportion of these admissions that are related to Synthetic Cannabinoid Receptor Agonists (SCRAs)⁵, as opposed to cannabis / skunk

⁵ Further information on SCRAs and use in Wales is available from WEDINOS at:
http://wedinos.org/resources/downloads/Philtre_Issue_6.pdf

3.6. Substance misuse service assessments

As in previous years, alcohol was the most frequently reported primary problematic substance amongst those assessed for substance misuse treatment, with 11,273 assessments carried out in 2014-15, 54.3 per cent of all assessments⁶. The next most frequently reported primary substance were heroin (3,927 assessments, 18.9 per cent) and cannabis (9.3 per cent). Men accounted for 66.8 per cent of all assessments. Chart 8 shows the number of assessments in each of the past five years by primary problematic substance.



Source: Welsh National Database for Substance Misuse, 2015

Chart 8: Number of assessments to specialist substance misuse treatment services, individual patients, 2010-11 to 2014-15, by top three most frequently reported primary substances.

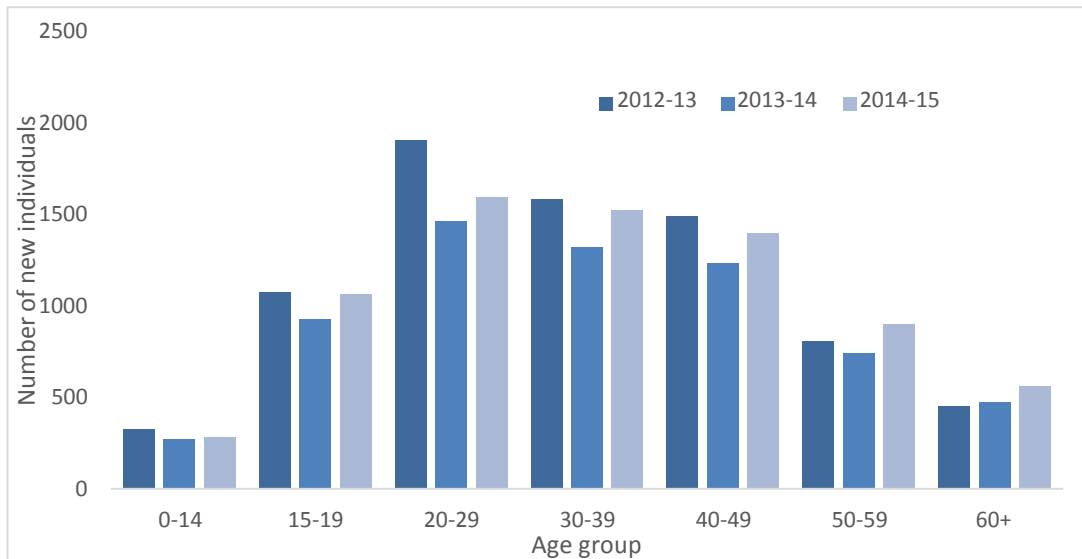
⁶ Note that due to changes in the methodology for analysing and reporting statistics related to drug treatment in Wales, assessments have been selected as the statistic offering the greatest accuracy and insight into patterns of treatment access across Wales. Previous Profiles reports used referrals. The Welsh National Database for Substance Misuse is live, data is revised each year and is therefore not comparable with previous years' reports.

Chart 8 also illustrates some substantial changes over time. Between 2013-14 and 2014-15, the most substantial changes were:

- Increases in assessments for amphetamines (up 56.3 per cent to 888 assessments) and cocaine (up 25.8 per cent to 732)
- Decreases in assessments for methadone⁷ (down 17.8 per cent to 387 assessments) and, perhaps most notably, mephedrone, which accounted for 211 assessments in 2013-14, but only two in 2014-15, a fall of 99.1 per cent.

3.6.1 New individuals in contact with specialist substance misuse services

Trend data on the number of new individuals contacting specialist substance misuse services for the first time for treatment for problematic substance misuse is only available for the period 2012-13 to 2014-15 due to methodological changes in data recording. However, in the last year, the number of new individuals rose by 13.9 per cent, from 6480 in 2013-14 to 7378 in the last year. As indicated in Chart 9, the only age group in which steady increases year on year are the over 60 age group. Further data is required to assess trends over time.



Source: Welsh National Database for Substance Misuse, 2015

Chart 9: New assessments for substance misuse by five year age band, Wales, 2011-12 to 2014-15

⁷ It is not possible to state whether this refers to Methadone that has been prescribed as part of treatment or 'street' / non-prescribed Methadone

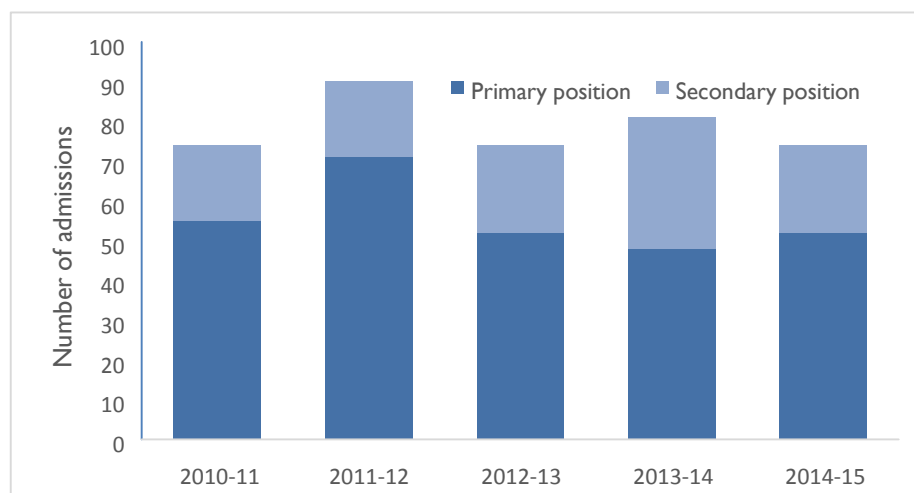
4. Pre and post-natal health

4.1. Conditions originating in the perinatal period: Foetal alcohol syndrome

Foetal alcohol syndrome (FAS) is a serious condition in which affected children have facial abnormalities, restricted growth, learning and behavioural disorders and physiological problems resulting from maternal consumption of alcohol during pregnancy⁸. There were seven admissions relating to FAS in 2014-15, one fewer than in 2013-14. No trend is observable in figures over recent years, and such small numbers preclude further analysis.

4.2. Foetus and New-borns affected by maternal use of or withdrawal from drugs of addiction

As indicated in Chart 10, following a notable increase in the number of admissions of foetus/new-borns affected by maternal use of or withdrawal from drugs of addiction in the primary position in 2011-12, the number of admission has returned to the stable levels of previous years. In 2014-15 there were 52 admissions for this condition in the primary diagnostic position, with an additional 22 in any diagnostic position. This shows a relatively consistent trend with figures for the 2013-14 (48 admissions) and 2012-13 (52 admissions). There was an increase in the number of admissions including a diagnosis of foetus/new-borns withdrawal from maternal drugs of addiction in 2013-14, with the number rising from 22 to 33. However, in 2014-15, that figure was once more 22 admissions, in line with longer term trends.



Source: Patient Episode Database for Wales, 2015

Chart 10: Foetus and new-born affected by maternal use of, or withdrawal from, drugs of addiction in Wales 2010-11 to 2014-15

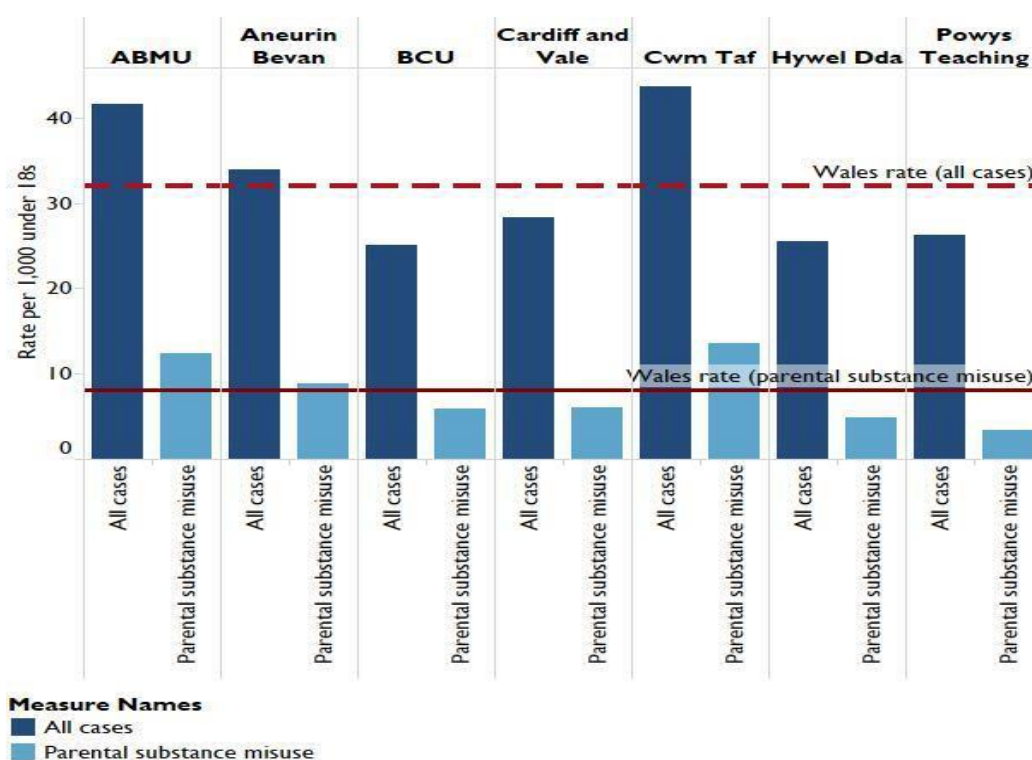
⁸ Further information on Foetal Alcohol Syndrome and related conditions is available at: <http://www.nhs.uk/Conditions/foetal-alcohol-syndrome/Pages/Introduction.aspx>

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

5.1. School aged children

5.1.1. Children in care with parental substance misuse

There were 5,120 cases of children in need⁹ registered with local authorities at 31 March 2014¹⁰ due to parental substance misuse,¹¹ a 3.7 per cent increase from 2013. This represents a larger proportional increase than was seen for all cases of children in need, which rose by 1.1 per cent to 20,145. Crude population rates (aged 0-18 years) for total cases and cases due to parental substance misuse are shown in Chart 11, along with Wales' rates for both measures.



Source: Welsh Government, 2015

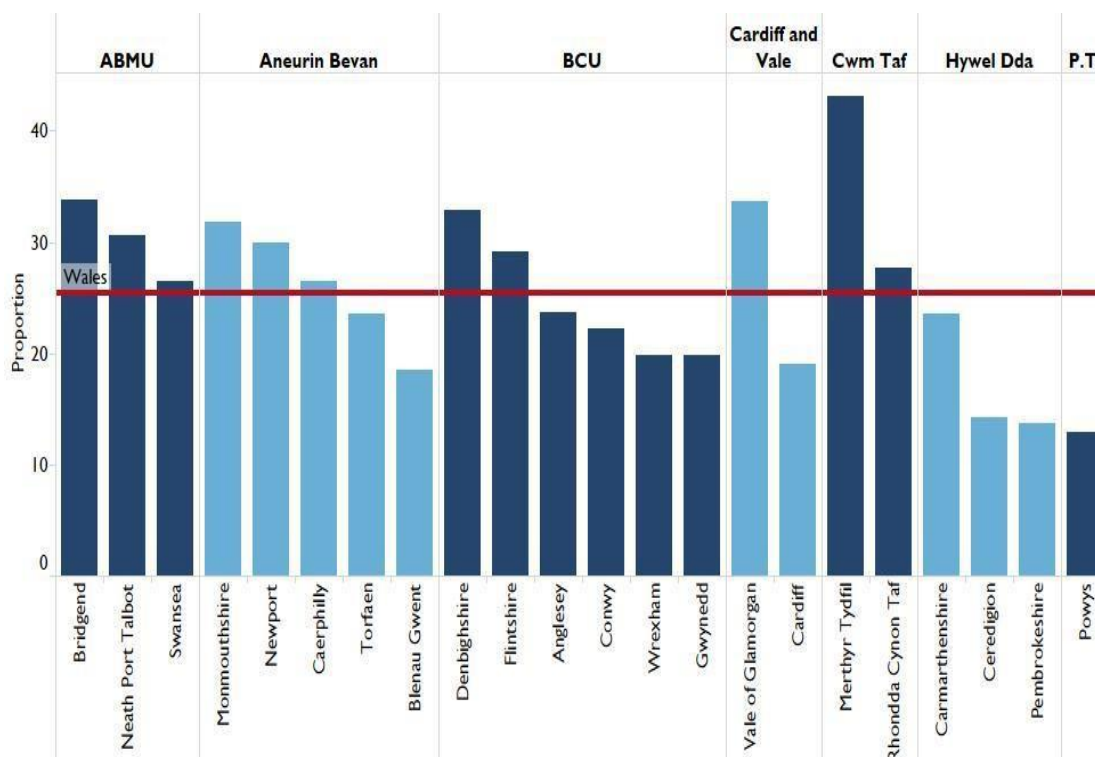
Chart 11: Crude population rates of children in need, all cases and cases due to parental substance misuse by Health Board, Wales 2014

⁹ The term 'child in need' is set out in the Children's Act (1989) as a child who is likely to have their health significantly impaired, or who is unlikely to maintain a reasonable standard of health and development without the provision of local authority children's services, or who is disabled. This is distinct from children 'in care' or 'looked after' (where a local authority has taken responsibility for care of a child in place of the child's parents) or 'children on the child protection register' which refers to children for whom there is a plan for protection in place.

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 nature of the parental substance misuse i.e. problematic alcohol, drug use or both, is not recorded and as such cannot be reported here

However, there was notable variation between local authorities in the proportion of cases of children in need due to parental substance, as shown in Chart 12.



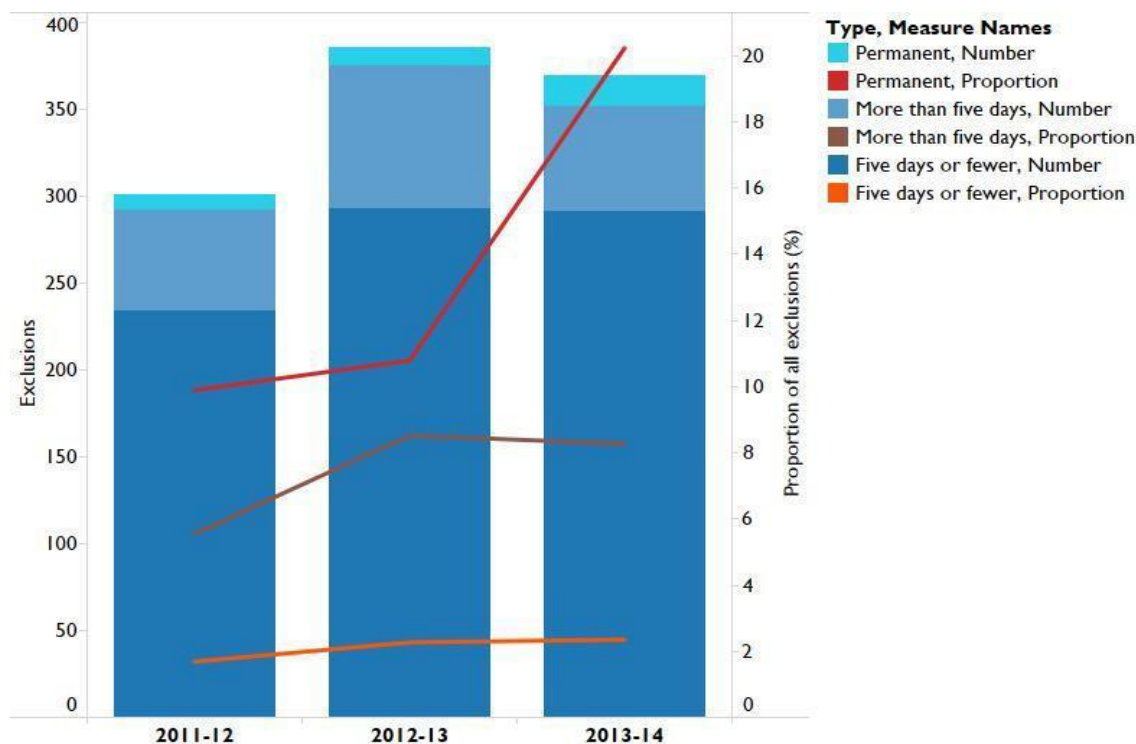
Source: Welsh Government, 2015

Chart 12: Proportion of cases of children in need with parental substance misuse by Welsh Local Authority, 2014

The local authority recording the lowest proportion of children in need due to parental substance misuse was Powys with 12.9 per cent, a considerable decrease on 2013 with 29 per cent. This is consistent with other data sources reported here indicating overall lower levels of substance misuse in Powys when compared to other areas of Wales. Merthyr Tydfil (43.1 per cent), the Vale of Glamorgan (33.7 per cent) and Bridgend (33.9 per cent) were, as in 2013, the local authorities with the highest proportions of children in need due to parental substance misuse.

5.1.2 School exclusions due to substance misuse

Chart 13 shows the numbers of school exclusions described as ‘drug and alcohol related’ (permanent and for five days or fewer) and the proportion of all exclusions accounted for by exclusions.



Source: StatsWales, 2015

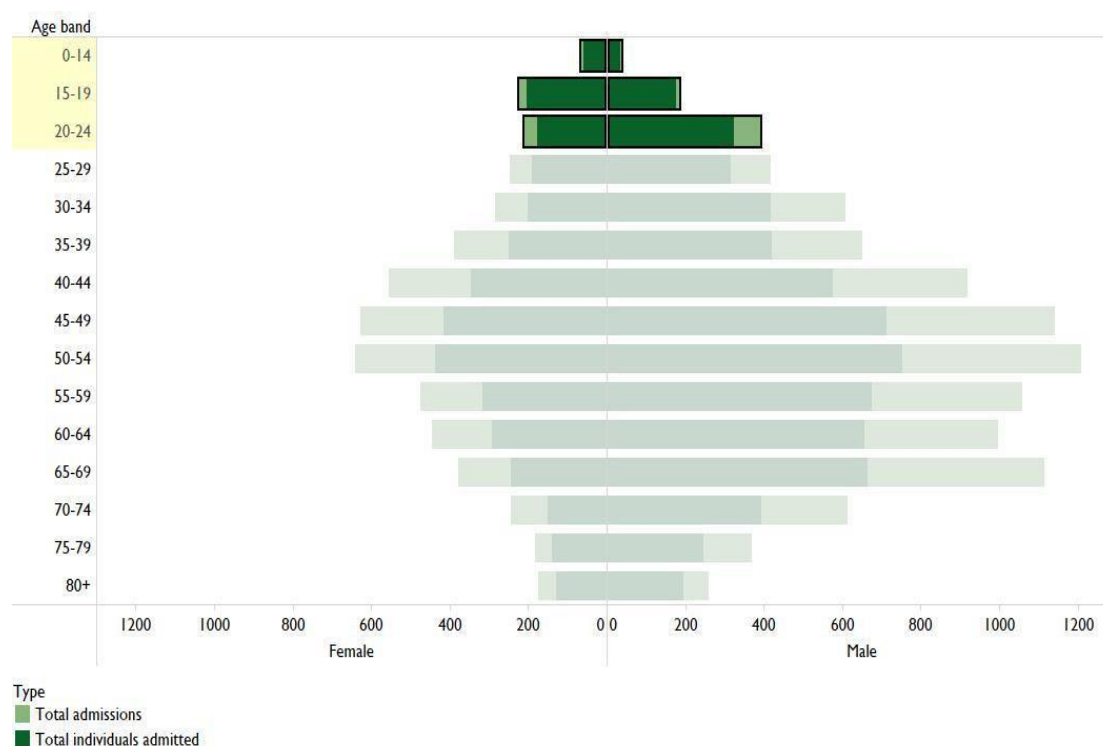
Chart 13: Drug and alcohol related permanent and fixed term (five days or fewer) exclusions from Welsh schools, numbers and proportion of all exclusions

In 2013-14, the most recent year for which statistics are available, there were 18 permanent drug and alcohol related exclusions from Welsh schools, 61 fixed term for more than five days and 291 exclusions for five days or fewer. Following a rise of 25.2 per cent in the number of exclusions for five days or fewer between 2011-12 and 2012-13, this number remained relatively stable between 2012-13 and 2013-14. However, as the overall number of fixed term exclusions for five days or fewer fell over this period by 4.2 per cent (to 12,375) the proportion of all exclusions accounted for by drug and alcohol related exclusions rose very slightly from 2.3 per cent to 2.4 per cent. Whilst the proportion of permanent exclusions due to substance misuse rose from 10.8 per cent in 2012-13 to 20.2 per cent in 2013-14, this only represents an increase of 7 exclusions and the numbers for fixed term (more than five days) and permanent exclusions are so small that it is difficult to draw any inferences as to longer term trends.

5.2 Children and young people aged up to 24

5.2.1 Hospital admissions related to alcohol amongst children and young people (aged up to 24)

Alcohol specific admissions (see Appendix I for definitions), considered both by the number of individuals admitted and the total number of admissions, continued to show a general downward trend amongst young people under 25 in 2014-15. As shown in Chart 14, in 2014-15 there were 972 individual patients (55 per cent males, 45 per cent female) admitted in Wales, down from 1,151 individual patients admitted in the previous year, a fall of 15.6 per cent.



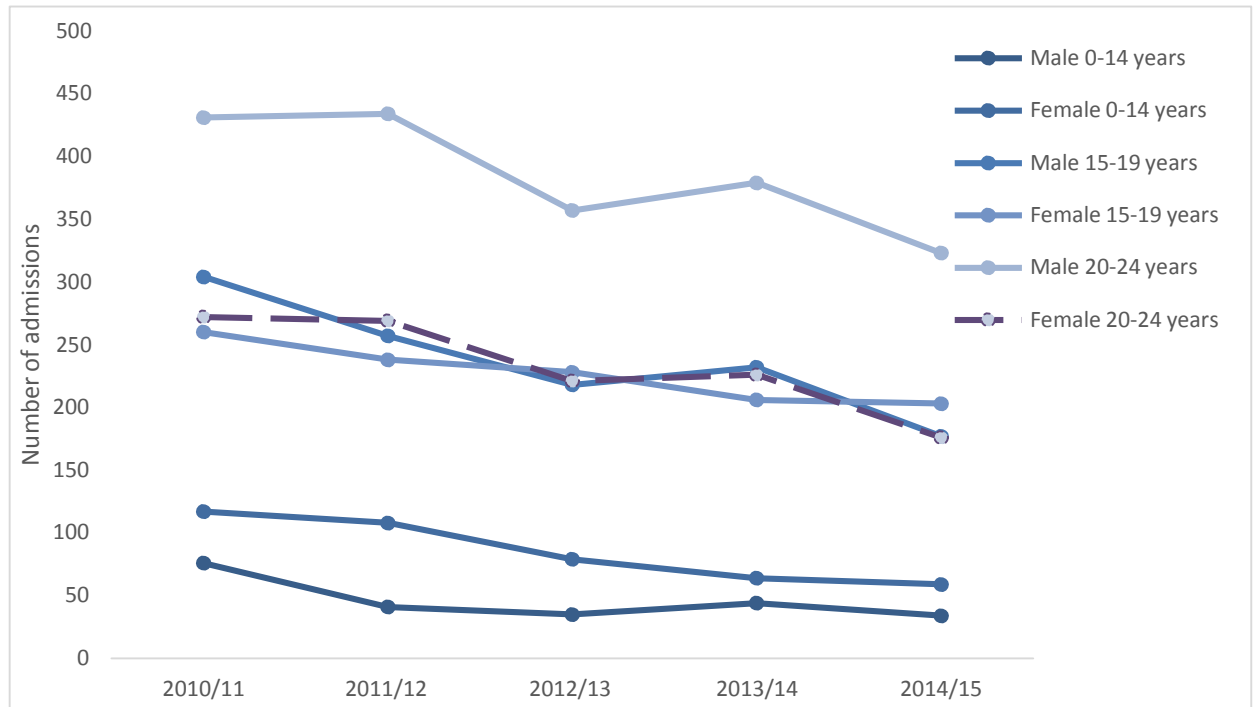
Source: Patient Episode Database for Wales, 2015

Chart 14: Hospital admissions for alcohol specific conditions in any diagnostic position, young people aged 0-24, by age band and gender, individuals and total number of admissions 2014-15

The total number of admissions to hospital for alcohol specific conditions recorded in any position amongst those under 25 in Wales in 2014-15 was 1,105, a slightly smaller proportional fall of 13.7 per cent on the previous year when compared with the person-based admissions, as described above. The falls in overall admissions followed the patterns of numbers of individual patients admitted, with proportional reductions slightly higher amongst males (15.9 per cent fewer admissions in 2014-15) than amongst females (11 per cent fewer). Of those 1,105 alcohol specific admissions for those aged under 25 in any diagnostic position, 306 were in the primary position, representing 27.7 per cent of the total, almost unchanged from previous years.

Decreases were recorded for both males and females with the greatest proportional reductions seen amongst males aged 15-19 (177 individuals admitted in 2014-15, a reduction of 23.7 per cent on 2013-14), and males aged 0-14 (24 individuals in 2014-15, down 22.7 per cent) and women aged 20-24 (176 individuals, down 22.1 per cent).

With the exception of a small (1.3 per cent) rise between 2012-13 and 2013-14, the number of young people admitted to hospital with alcohol specific conditions has fallen by a third since 2010-11, when 1,459 admissions were recorded as shown in Chart 15.



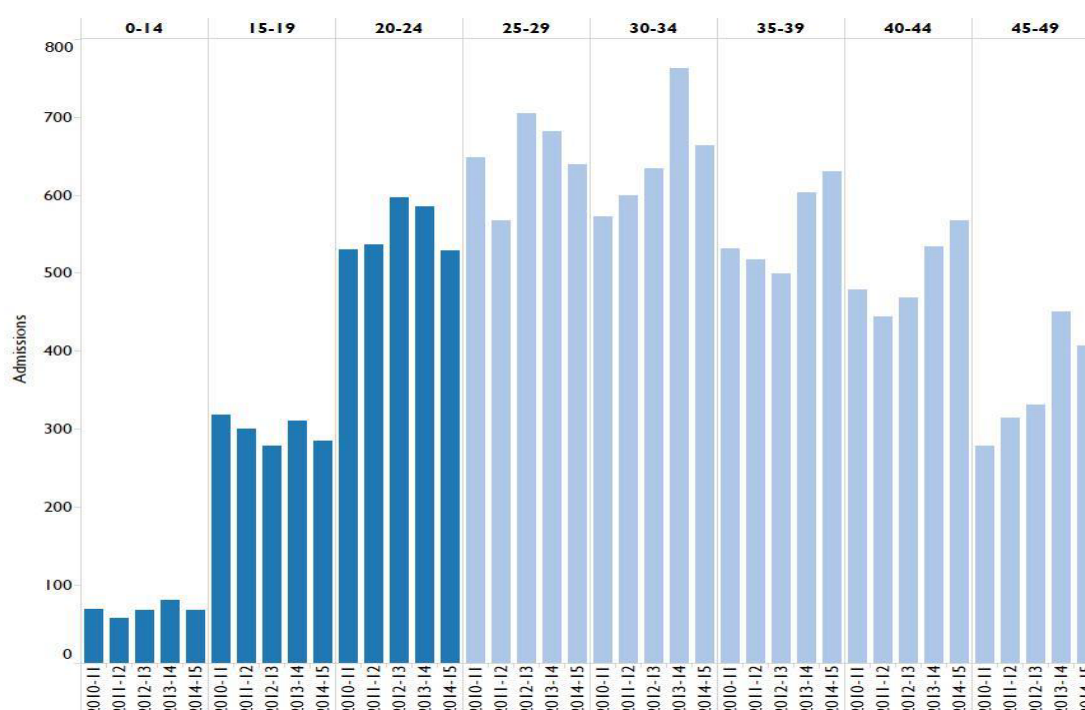
Source: Patient Episode Database for Wales, 2015

Chart 15: Hospital admissions for alcohol specific conditions in any diagnostic position, young people aged 0-24, by age band and gender, person based admissions, Wales 2010-11 to 2014-15

Admissions to psychiatric hospitals for alcohol specific conditions accounted for 4.1 per cent of all admissions; again, this proportion appears stable amongst this age group over the past five years.

5.2.2 Hospital admissions for poisoning by named illicit drugs in children and young people (aged up to 24)

In 2014-15, 789 individuals aged under 25 were admitted to hospital for a condition relating to poisoning by a named illicit drug¹², with a total of 882 hospital admissions, representing decreases of 9.4 per cent and 9.7 per cent respectively from the previous year as shown in Chart 16. Males represented 58.4 per cent of the individual patients admitted and 57 per cent of the total admissions. Decreases in admissions from the previous year were more marked for males (12.5 per cent) than females (4.7 per cent) amongst under 25 year olds. For just over half of the admissions in 2014-15 (51.5 per cent), the diagnosis was in the primary position, consistent with previous years.



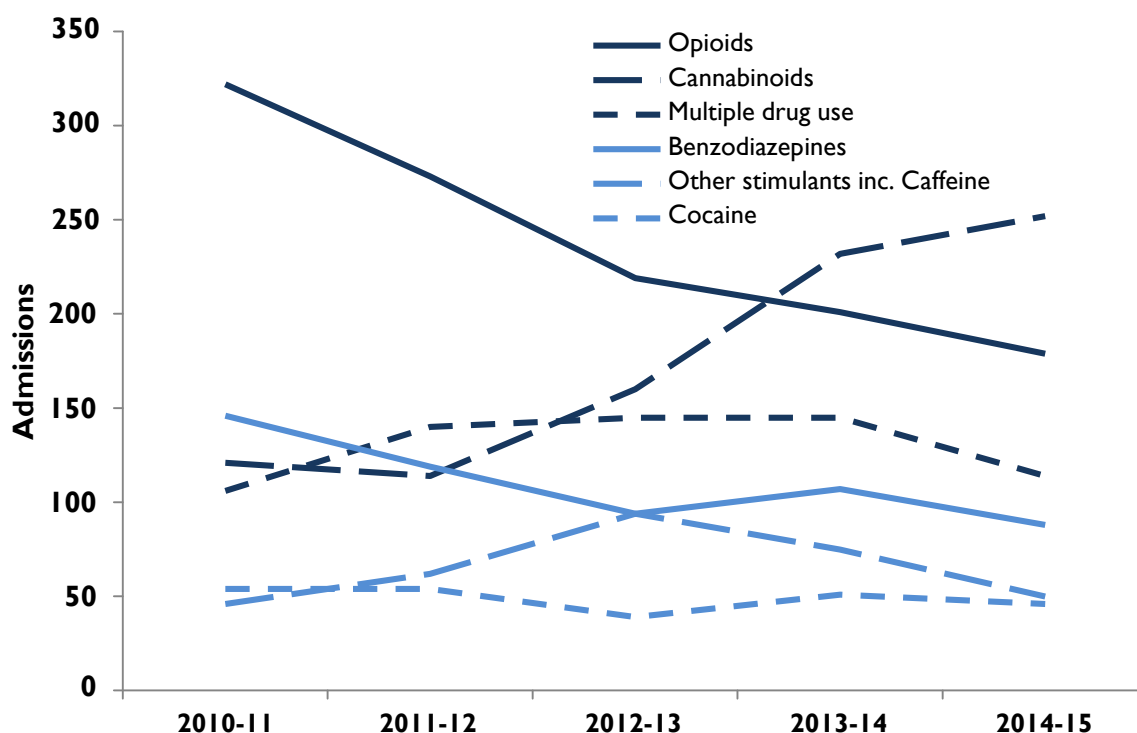
Source: Patient Episode Database for Wales, 2015

Chart 16: Hospital admissions for poisoning with an illicit named drug, any diagnostic position, by five year age band, 2010-11, persons aged 0-24 years

Of the 882 total admissions, there were 113 admissions to psychiatric hospitals with a diagnosis of poisoning by a named illicit drug amongst this age group in 2014-15, representing 12.8 per cent of all admissions. This was a considerable decrease on 2013-14, when the 182 admissions to psychiatric hospitals of young people aged under 25 years represented 18.6 per cent of all admissions. The overall proportional decrease between 2010-11 and 2014-15 was 16.1 per cent.

¹² See Appendix 3 for definition of 'poisoning by illicit drugs'.

As shown in Chart 17, presenting the number of hospital admissions by substance in 2014-15, the most frequently reported substance involved in hospital admissions for young people was cannabinoids¹³ (252 admissions, a rise of 8.6 per cent on 2013-14) followed by opioids (179, down 10.9 per cent). The steady fall in admissions involving 'other stimulants', continues with an almost 50 per cent decrease in the last two years to 46 in 2014-15. For the period 2011-12 to 2013-14, the number of young people admitted to hospital with multiple drug use recorded was in the range 140-145, however, this number fell in 2014-15 to 114.



Source: Patient Episode Database for Wales, 2015

Chart 17: Hospital admissions for poisoning with a named illicit drug, any diagnostic position, most frequently reported substances, Wales 2010-11 to 2014-15, young people aged 0-24

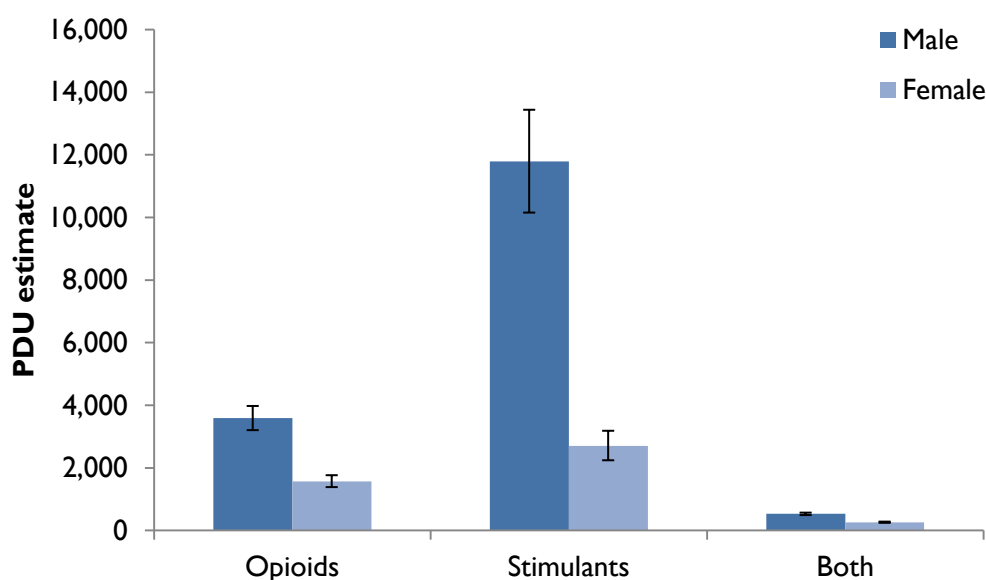
In relation to gender and age band differences, the largest decreases in hospital admissions were observed amongst males aged 0-14 (from 37 to 22 admissions) and males aged 15-19 (down 19.3 per cent to 142). Amongst females, there were smaller falls recorded in the 0-14 age group (from 42 to 40) and the 20-24 age group (down 9.2 per cent at 168) but a rise in admissions amongst females aged 15-19 years (rise of 2.6 per cent to 120).

¹³ It is not possible to establish the number of hospital admissions for cannabinoids that are accounted for by synthetic cannabinoid receptor agonists.

5.2.3 Prevalence of problematic drug use in young people aged 18-29 years

Problem drug use (PDU) has been 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’.¹ In Wales, PDU estimates were last produced in 2009-10. Since that time, a wider range of data sources have become available to produce an estimate and additional statistical techniques offering potentially more robust analyses have been developed. There has also been the opportunity to include amphetamine type stimulants (ATS, including substances such as amphetamines, MDMA and mephedrone) in addition to opioids and cocaine/crack which formed the basis of previous estimates. Therefore the estimates in this report are not comparable to those published previously.

As indicated in Chart 18, which groups substances as opioids and stimulants (including ATS and cocaine/crack) problem drug use prevalence varies by gender and primary drug type. Overall, amongst young people, higher prevalence rates are observed for problematic stimulant use, with an estimated 11,786 men and 2,700 women in this age group primarily using these substances compared with 3,588 men and 1,570 women using opioids only. An additional there are an estimated 532 men and 264 women aged 18-29 using both stimulants and opioids problematically. See Appendix 7 for details of the prevalence estimation techniques used in this report.



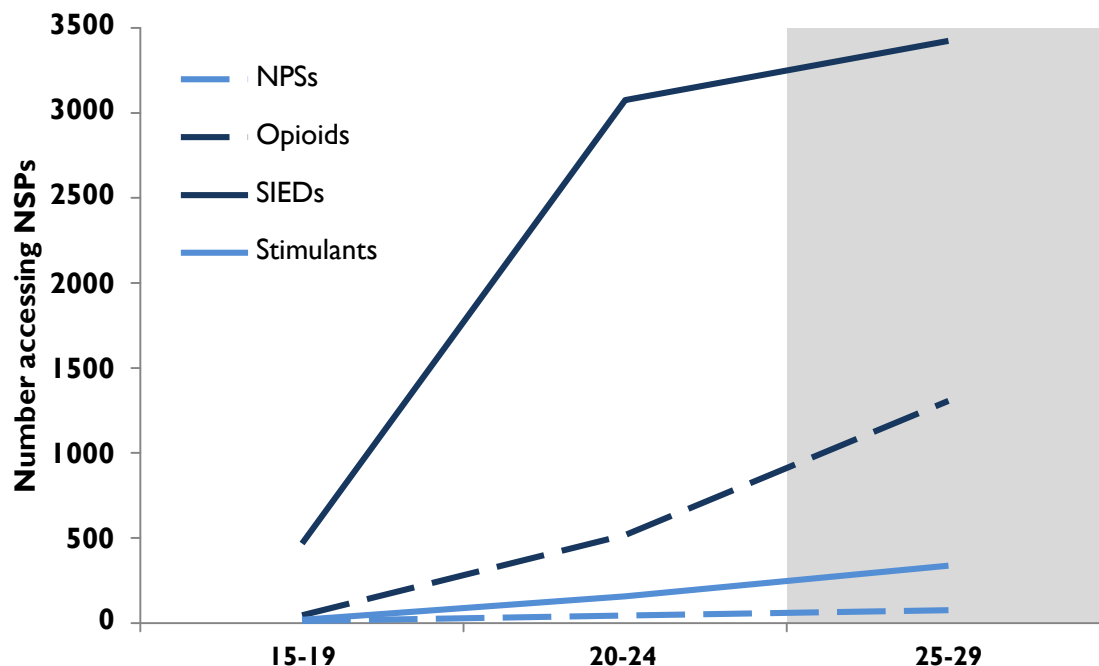
Source: Public Health Wales, 2015

Chart 18: Estimated number of problem drug users in Wales aged 18-29, 2014-15, by gender and substance type with confidence intervals (see Appendix 7)

¹ 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 ecstasy or cannabis. Further information is available at: [EMCDDA | Methods and definitions](#)

5.2.4 Young people who inject drugs (aged up to 24 years) who are accessing 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; previously referred to as Needle Exchanges) 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 online¹⁴. **It is important to note that this data report on only the primary drug injected by each individual service user – the majority of injecting and problematic drug use involved use of more than one substance and frequently more than one class of substances e.g. opioid, stimulant and increasingly NPS use.** Chart 19 shows the number of individuals under 25 who accessed these services in 2014-15. In all, 4,338 individuals under 25 were recorded, representing 17.2 per cent of all those accessing services. Of all in this age group, 3,542 (81.7 per cent) reported primarily using Steroid and Image Enhancing Drugs (SIEDs), with 564 (13 per cent) reporting primary opioid use.



Source: Harm Reduction Database, 2015

Chart 19: Number of young people aged 0-24 who inject drugs accessing NSP services by age band in Wales, 2014-15

¹⁴See <http://www.wales.nhs.uk/sitesplus/888/page/72997> for further details about the Harm Reduction Database

5.2.5 Risk behaviours amongst young people who inject drugs (aged up to 24)

In relation to the risks associated with injecting drug use, the practice of sharing injecting equipment, both direct (the sharing of needles and syringes) and indirect (the sharing of other injecting-related equipment including spoons/cookers, filters, water), have a clear impact on rates of injecting-related infections. Of particular concern are blood borne viral infections, including hepatitis B, hepatitis C and HIV. An overview of risk and protective behaviours across the whole population is provided in Section 8.

5.2.5.1 Direct and indirect sharing

Evidence on direct and indirect sharing and blood borne virus (BBV) testing and prevalence 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 England¹⁵. Sharing of injecting equipment is also recorded on the Harm Reduction Database (HRD) which records transactions in statutory and voluntary Needle and Syringe Projects (NSPs) across Wales (see Section 5.2.4 for further details on the HRD).

According to the 2014 data from the UAM survey, 17 per cent (259 of 1,540 respondents) of PWID reported direct sharing of injecting equipment (i.e. sharing syringes or needles) and 38 per cent (597 of 1,558) reported direct or indirect sharing (i.e. sharing any equipment, including filters, spoons, etc.) in the previous four weeks. The rates of sharing amongst younger PWID were higher, with 20 per cent (24 of 118) under 25 year olds reporting direct sharing and 51 per cent (60 of 118 respondents) under 25 years reporting direct or indirect sharing. Whilst these higher rates of reported equipment sharing are concerning, it should be noted that whilst overall sharing rates remained almost identical to the previous year (with a fall of 1 percentage point in each case) reported sharing amongst under 25s fell slightly for direct sharing (3 percentage points) and considerably for direct and indirect sharing (11 percentage points).

Data from the HRD on self-reported equipment sharing of injecting equipment amongst those aged under 25 years indicated rates of 1.1 per cent direct sharing and 1.46 per cent indirect sharing. These rates are clearly lower than those reported to the UAM across England, Wales and Northern Ireland, however, this may be related to the levels of primary SIEDs injecting amongst this age group with less risky injecting practices involved and/or poor data quality. Further investigation is required to establish more accurately the differences in datasets.

¹⁵ 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-hepatitis-monitoring#history>

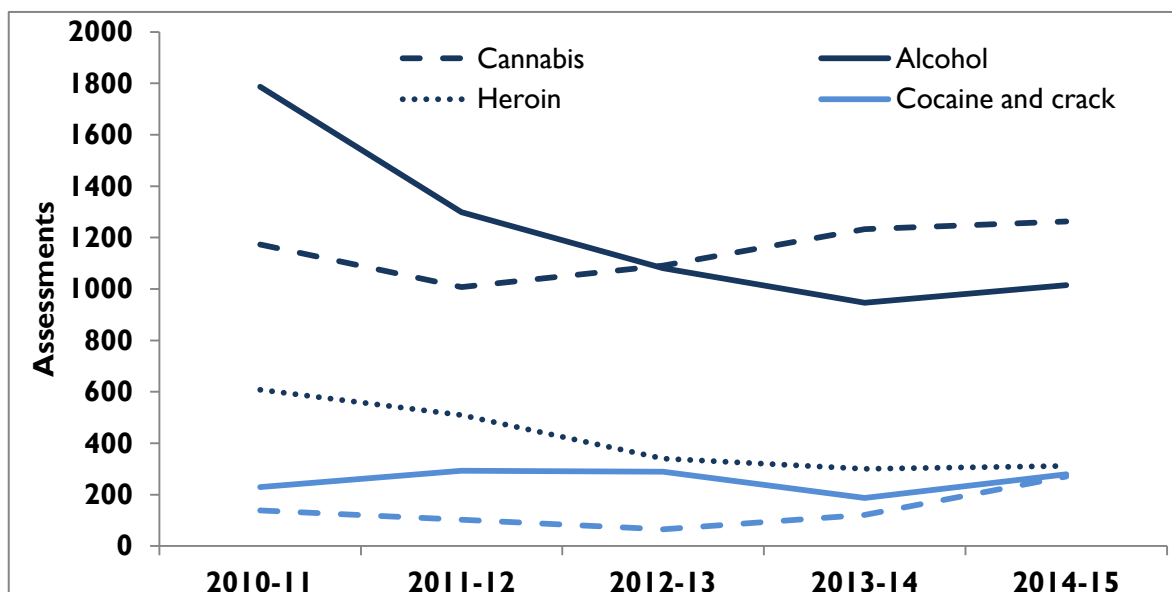
5.2.5.2 Blood borne viruses, referrals for testing and vaccination

In addition to self-reported levels of equipment sharing, project workers in statutory and voluntary services can record referrals for blood borne virus (BBV) testing and for hepatitis B vaccination. In 2014-15, 1,376 statutory/voluntary NSP service users were referred for BBV testing, of whom 142 were under 25. This represents a rate of BBV testing referral of 11.1 per cent amongst young people aged under 25 years compared with 14.8 per cent amongst those aged over 25s years for those regularly accessing NSPs. When examining the number of referrals for hepatitis B vaccination, the figures were 236 for those aged under 25 years referred from a total of 1,483 individuals, a rate of 18.5 per cent compared to a rate of 15 per cent for NSP service users aged 25 years and over; this divergence in these two key areas of harm reduction deserves further investigation.

5.2.6 Referrals to substance misuse treatment services amongst young people (aged up to 24)

In 2014-15, there were a total of 3,466 individuals aged under 25 assessed for substance misuse treatment and recorded on the Welsh National Database for Substance Misuse, representing 16.7 per cent of all those assessed. This was an increase of 5.2 per cent on the number assessed compared with 2013-14, a rise that was almost entirely accounted for by an additional 170 assessments for males (a 7.7 per cent increase).

As can be seen in Chart 20, which presents the five most frequently reported primary substances of use, cannabis has become the most common substance cited by young people under 25 over the past two years, with 1,263 assessments in 2014-15, an increase of 2.4 per cent on the previous year. After substantial falls in the number of assessments for alcohol as the primary problematic substance for three consecutive years, the number of assessments rose slightly in 2014-15 to 1,051 (up 7.3 per cent). However, over the five year period alcohol related assessments have fallen 43.2 per cent. Assessments in which heroin was reported as the primary problematic substance have followed a similar pattern over time to that seen for alcohol, with substantial proportional falls for three consecutive years followed by a small rise in 2014-15, in this case of 3.7 per cent to 311. Other notable changes between 2013-14 and 2014-15 include a substantial rise in reported primary amphetamine use (up 124 per cent to 271 assessments) and in reported primary cocaine use (up 56.9 per cent to 273). Mephedrone related assessments, rose from 30 in 2010-11 to 361 in 2012-13 continued the sharp decline of last year, with only two assessments recorded in 2014-15.



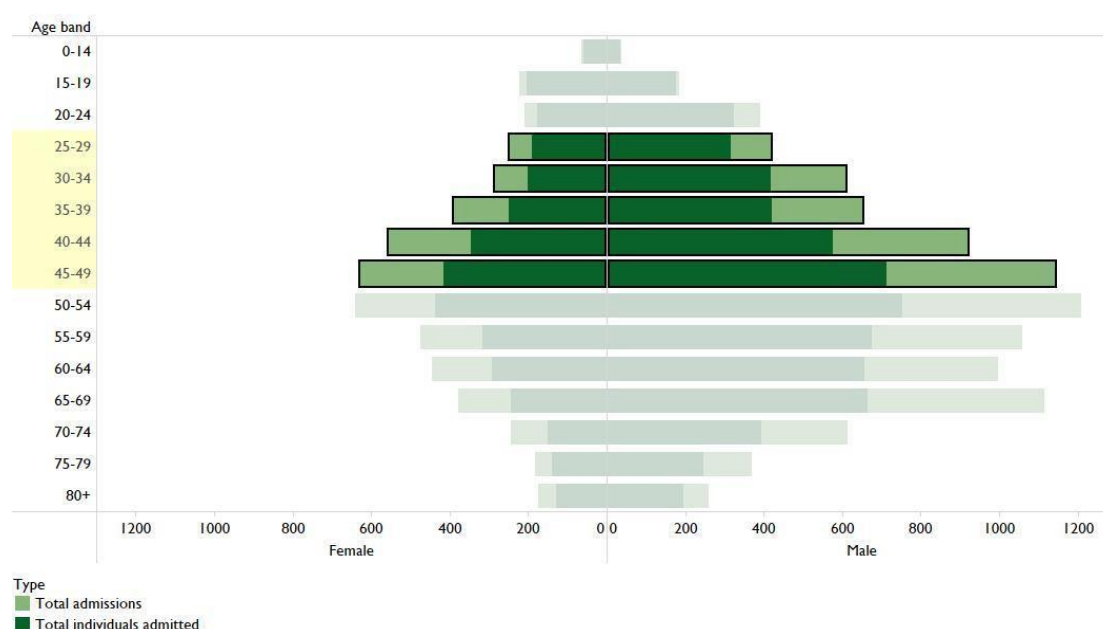
Source: Welsh National Database for Substance Misuse, 2015

Chart 20: Number of assessments reported for young people aged 0-24 seeking access to treatment in Wales, five most frequently reported primary substances of use, 2010-11 to 2014-15

6 Working age adults (aged 25 to 49 years)

6.1 Hospital admissions for alcohol specific conditions, working age adults

There was an overall reduction of 11.2 per cent in the number of working aged adults admitted to hospital with alcohol specific conditions in 2014-15 with 3,842 individual patients admitted, down from 4,325 in 2013-14. As with the figures for young people aged under 25, there was a greater reduction amongst males (13.1 per cent) than amongst females (7.5 per cent). Data for 2014-15 are presented in Chart 21.



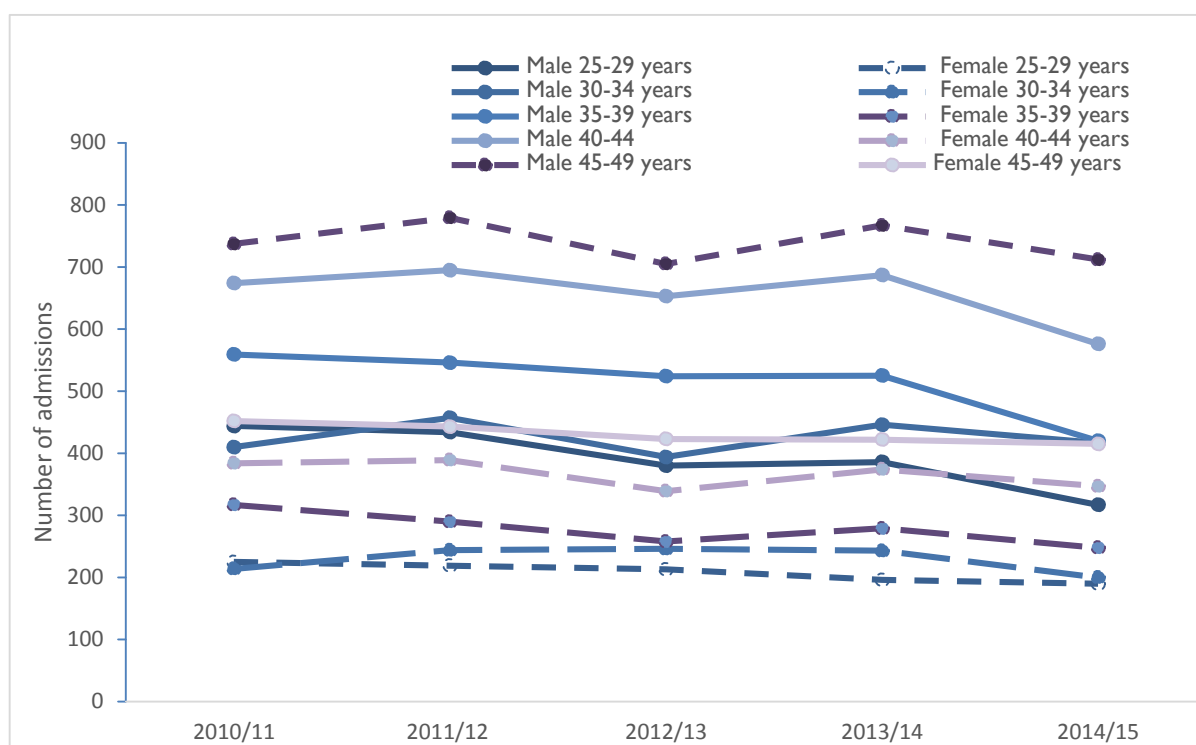
Source: Patient Episode Database for Wales, 2015

Chart 21: Individual patient and total hospital admissions for alcohol specific conditions in any diagnostic position, working age adults, 25-49, by age band and gender, 2014-15

As with figures for young people under 25, changes in the total number of admissions broadly reflected changes in the number of individuals admitted. There were a total of 3,737 admissions involving men aged 25-49, a fall of 14.6 per cent on the previous year, whilst 2,104 alcohol specific admissions involved women, a fall of 7 per cent. There were 1.52 admissions per individual admitted across the year; this is substantially higher than for the 0-24 age group where the proportion was 1.14 in 2014-15. The figures suggest a clear rise in this mean number of total admissions per individual admitted as age increases. For those aged 25-29, there were 1.31 admissions per individual admitted; for those aged 45-49 the figure was 1.57.

Of the 5,841 alcohol specific admissions in this age group, 1,578 were in the primary position, representing 27 per cent of all admissions. This is almost identical to the proportion seen amongst young people aged under 25, and is comparable over time.

However, whilst there have been substantial falls over time in the number of women and men admitted, a reduction amongst women of 12.1 per cent and 13.5 in males since 2010-11, as shown in Chart 22, it is difficult to discern consistent trends over time across either the age group as a whole or within distinct subsets. Comparing 2014-15 with 2013-14, there were notable differences between genders in terms of age sub-groups: the largest proportional falls amongst women were for those aged 30-39 (14 per cent), whilst for men, the age groups showing the greatest reductions were those aged 25-29 (28.6 per cent) and those aged 35-44 (17.8 per cent). However, those aged 45-49 accounted for the largest number of individuals admitted for alcohol specific condition of any five-year age band.



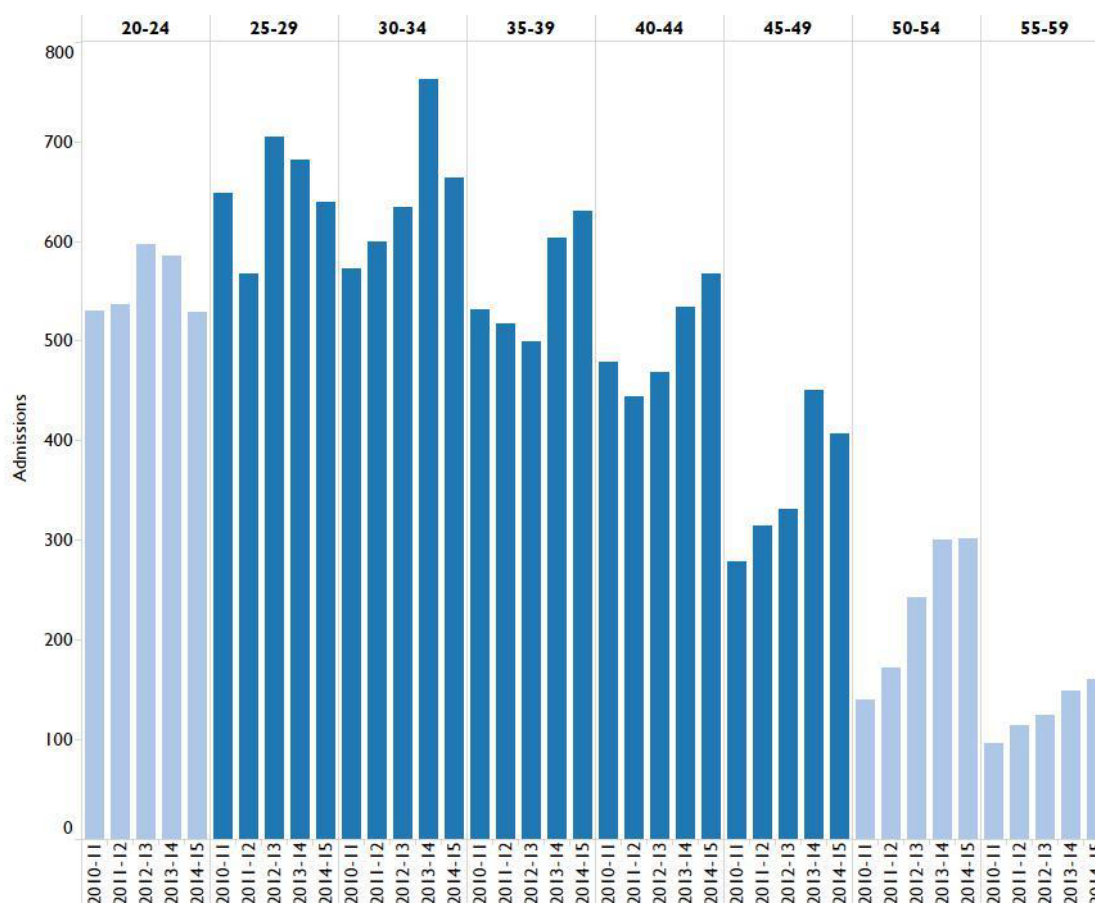
Source: Patient Episode Database for Wales, 2015

Chart 22: Hospital admissions for alcohol specific conditions in any diagnostic position, working age adults, 25-49, by age band and gender, person based admissions, Wales 2010-11 to 2014-15

The proportion of all admissions which were to psychiatric hospitals, at 6.8 per cent, was higher amongst working aged adults aged 25-49 than amongst the younger age group. However, in common with those aged under 25 years, there has been no observable change in this proportion over the past five years; there is also very little difference in the proportion of admissions accounted for by psychiatric hospital admissions between men and women.

6.2 Hospital admissions for poisoning with named illicit drugs in working age adults (25-49 years)

Whilst the number of individuals in the 25-49 age group admitted to hospital with any diagnosis of poisoning by a named illicit drug fell by 6.3 per cent to 2,413 and the overall number of admissions fell by 4.1 per cent to 2,908, there was considerable variation across the five-year age bands within this group, as shown in Chart 23.



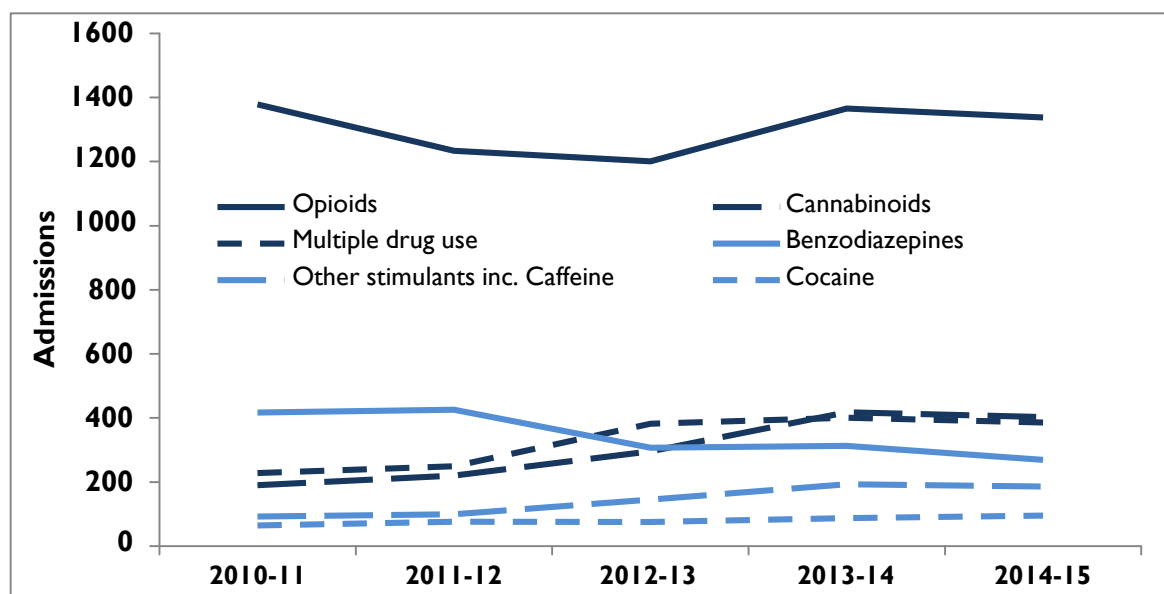
Source: Patient Episode Database for Wales, 2015

Chart 23: Hospital admissions for poisoning with an illicit named drug, any diagnostic position, by five year age band, 2010-11, working age adults, 25-49

From 2013-14, admissions in 2014-15 fell amongst 25-29 year olds (by 6.3 per cent to 639), 30-34 year olds (by 12.9 per cent to 664 (although this age band still accounts for the highest number of admissions across all ages) and 45-49 year olds (by 9.8 per cent to 407). Smaller rises were observed amongst 35-39 year olds (up 4.5 per cent to 630) and 40-44 year olds (up 6.4 per cent to 568).

Whilst men and women followed this general pattern by age band, the rises amongst 35-44 year olds were much smaller and the falls in admissions for other age groups were substantially greater amongst women, notably in the 30-34 age band, which saw 21.5 per cent fewer admissions involving women. Indeed, the reduction in admissions in 2014-15 across the whole of the working age (25-49 year olds) population was driven by falls in the number of admissions involving women, which were down 9.5 per cent to 1,027, compared with a reduction of 0.8 per cent amongst men to 1,881. Of the 2,908 admissions for this age group, a named illicit drug was recorded in the primary position in 979 cases (33.7 per cent), a lower proportion than that recorded amongst those aged under 25 years.

In terms of specific substances named in admissions, opioids continued to account for considerably more admissions than any other substance, with 1,338 admissions (46 per cent of all admissions for this age group). This represented a slight fall of 2 per cent compared with 2013-14; however, as Chart 24 suggests, there is no clear pattern of opioid related admissions in this age group over time. As detailed in Section 5.2.2, opioid related admissions have fallen for those aged under 25 years, whilst admissions involving cannabinoids have risen. Amongst 25-49 year olds, admissions involving cannabinoids fell by 3.6 per cent from the previous year to 403 in 2014-15 but considered over a five-year period this may reflect more a levelling off after rises from 2011-12. As with the under 25 year olds, but to a much smaller degree, admissions for multiple drug use fell by 3.7 per cent to 386. Admissions involving cocaine increase by 9.2 per cent to 95 admissions.

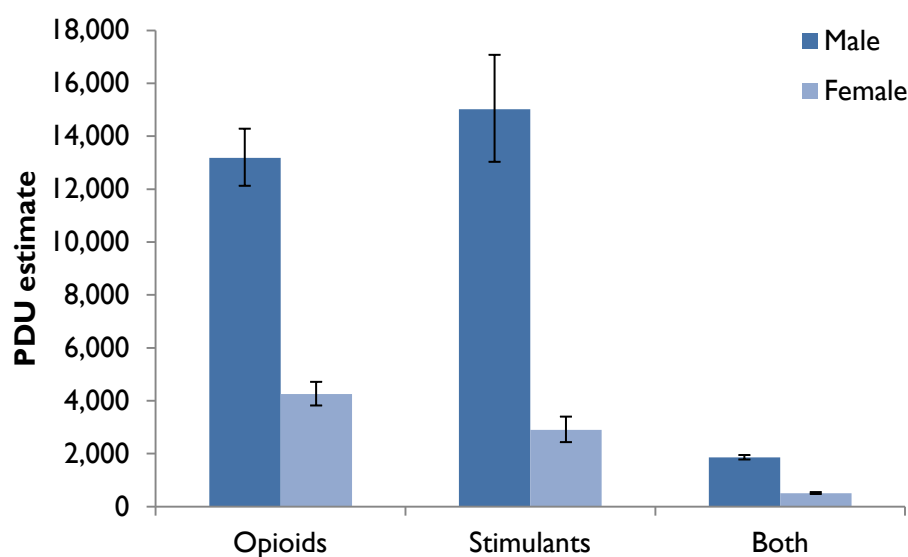


Source: Patient Episode Database for Wales, 2015

Chart 24: Hospital admissions for poisoning with a named illicit drug, any diagnostic position, most frequently reported substances, Wales 2010-11, working age adults, 25-49

6.3 Prevalence of problem drug use amongst working age adults (30-64 years)

Across this age group similar numbers were estimated to be using stimulants only problematically (17,931) and opioids only (17,443). However, as with estimates for the 18-29 year age group presented above, there was considerable variation by gender. Women made up 24.4 per cent of those using opioids only problematically (4,260 estimated female problem users) compared with 16.2 per cent of all problem users of stimulants only (2,904). An estimated 1,862 men and 510 women were using both opioids and stimulants problematically in the 30-64 age group. See Appendix 7 for details of the prevalence estimation techniques used in this report.



Source: Public Health Wales, 2015

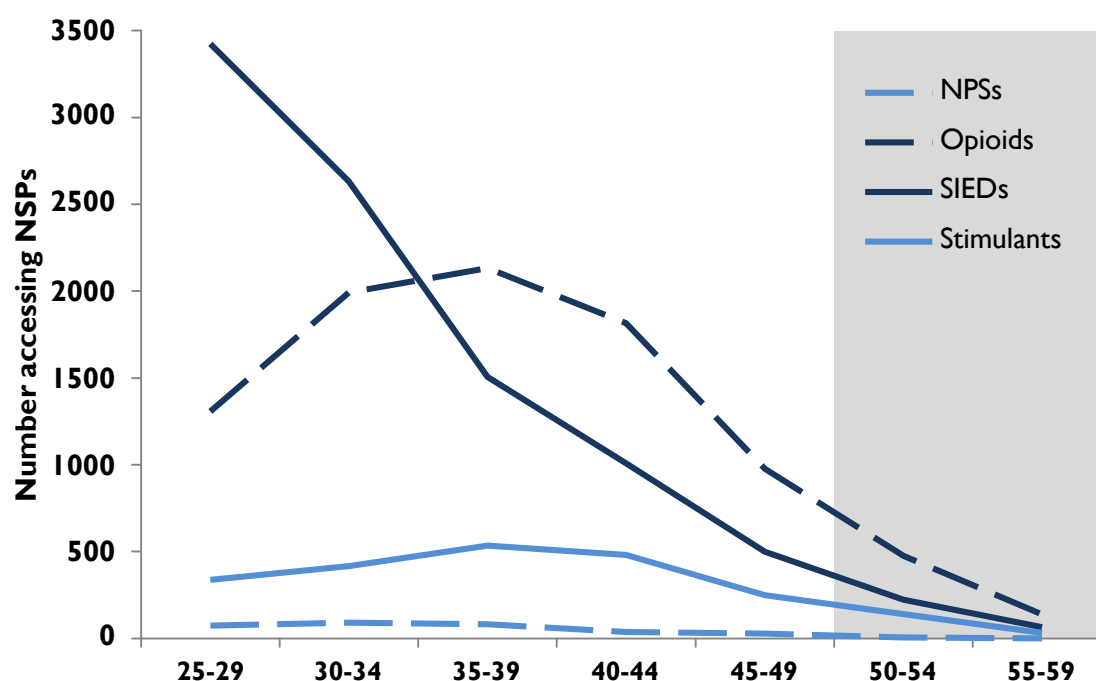
Chart 25: Estimated number of problem drug users in Wales aged 30-64, 2014-15, by gender and substance type with confidence intervals (see Appendix 7)

Problematic drug use varies by geographic area and a more complete table of prevalence estimates by gender, age and geographic area of residence, as well as details of the techniques of prevalence estimation, may be found in Appendix 7.

6.4 Individuals accessing Needle and Syringe Programmes, working age adults (25-49 years)

As described in Section 5.2.4, the Harm Reduction Database captures data on the provision of clean injecting equipment through statutory, voluntary and pharmacy services across Wales. Individuals aged 25-49 made up the majority of those accessing Needle and Syringe Programmes (NSP) in Wales in 2014-15, with 19,623 unique individuals recorded, representing 77.9 per cent of all those accessing.

As illustrated in Chart 24, Steroid and Image Enhancing Drugs (SIEDs) were the most frequently reported primary substance group injected, with 9,066 (46.2 per cent) describing themselves as a primary SIED injectors. However, reported SIED use substantially declines as age increases, with two thirds of all 25-29 year olds reporting primary SIED use compared with less than one third (28.5 per cent) of those aged 45-49. Reported primary opioid injecting peaks in the 35-39 age band, with 2,133 reported NSP service users, representing 50.1 per cent of all NSP users in that age band. Primary stimulant use also peaks in this age band, with 534 NSP service users, representing 12.6 per cent of all those in the 35-39 year age band. The majority of those accessing NSPs in this age groups were male (17,242, 87.8 per cent), although when SIEDs (which are predominantly used by males) are not included, men made up 81.2 per cent of all those accessing NSP services.



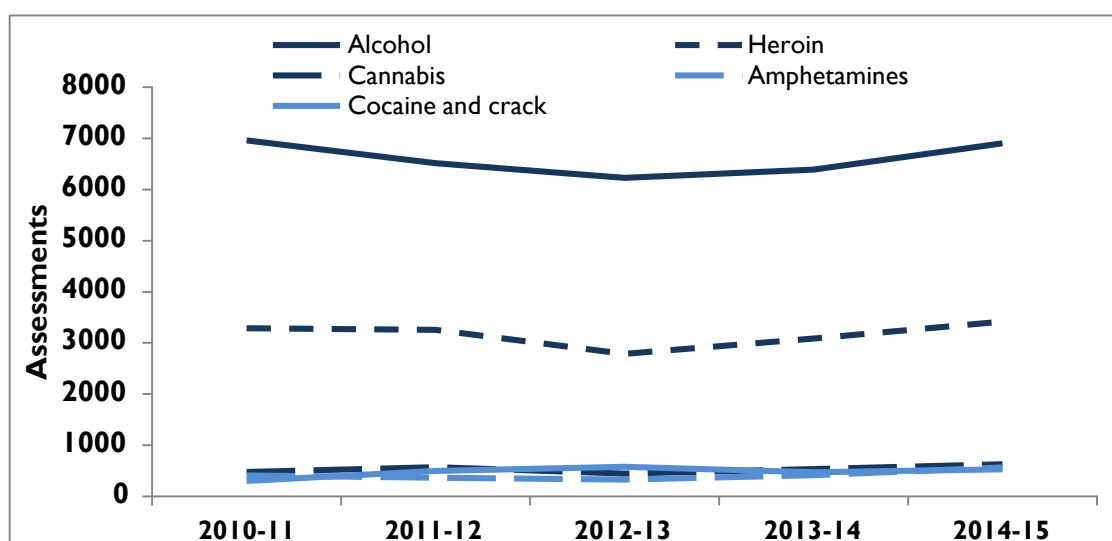
Source: Harm Reduction Database, 2015

Chart 24: Number of working age adults, 25-49 who inject drugs accessing NSP services by primary substance and age band, Wales, 2014-15

6.5 Assessment by substance misuse treatment services, working age adults (25-49 years)

There were 13,454 assessments for substance misuse treatment of individuals aged 25-49 years, representing 64.8 per cent of all assessments. 9,121 men were assessed, 67.8 per cent of all those assessed, a rise of 9.8 per cent on 2013-14. The 4,333 assessments for females represented a rise of 10.1 per cent on the previous year. Alcohol related assessments accounted for over half of all assessments (51.3 per cent, 6,903 assessments) and heroin was identified as the primary substance of problematic use accounting for a further 25.4 per cent (3,421 assessments). There was disparity in these proportions between men and women, with alcohol and heroin representing 48.3 per cent and 27.2 per cent respectively of all assessments of males but 57.5 per cent and 20.7 per cent of all assessments for females.

As can be seen in Chart 25, which presents assessments for treatment between 2010-11 and 2014-15 across all 25-49 year olds by primary substance of problematic use, alcohol and heroin related assessments have followed similar patterns over the past five years, with falls between 2010-11 and 2012-13 largely offset by rises in the subsequent two years. Considering assessment data for this age group beyond alcohol and heroin, there have been year on year changes between 2013-14 and 2014-15 similar to those seen amongst the under 25 year age group, although to a lesser degree. Notably, reported primary amphetamine use amongst working age adults assessed for treatment has risen substantially between the two time periods, increasing by 35.6 per cent to 568 assessments in 2014-15. Assessments for those reporting issues primarily with cannabis have also risen notably, to 630 in 2014-15, an increase of 18.4 per cent.



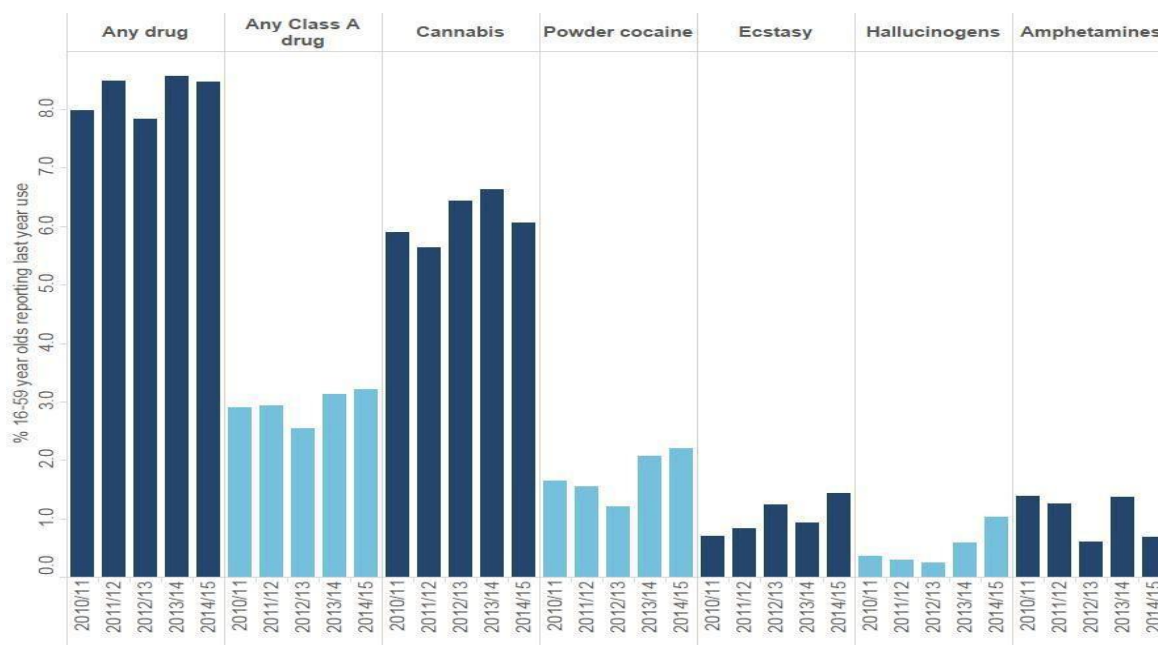
Source: Welsh National Database for Substance Misuse, 2015

Chart 25: Number of assessments for working age adults, 25-49 seeking access to treatment in Wales, five most frequently reported primary substances of use, 2010-11 to 2014-15

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

According to the Crime Survey for England and Wales (CSEW) 2014-15¹⁶, 8.5 per cent of 16-59 year olds in Wales used an illicit in the period 2014-15, an almost identical proportion to those reporting previous year illicit drug use in 2013-14 (8.4 per cent). As shown in Chart 26, the proportion reporting use of a Class A drug in the previous year was also stable relative to changes observed in previous years, rising from 3.1 to 3.2 per cent. However, there were notable changes in the proportions reporting use of specific substances. Whilst in Wales reported use of cannabis and amphetamines decreased by half a percentage point and 0.7 percentage points respectively, ecstasy use was reported by 1.4 per cent of 16-59 year olds, a rise of 0.5 percentage points compared with the previous period, and hallucinogen use was reported by 1 per cent; a rise of 0.4 percentage points.

This mixed picture can be contrasted with Wales data from 2013-14, when the reported use of all substances rose, with the exception of ecstasy. Taking a longer view of the CSEW data, over the decade from 2004-05 to 2014-15, there has been a statistically significant fall in the proportion of 16-59 year olds reporting any drug use (11 per cent in 2004-05), with declines in reported use of cannabis and amphetamine use (9.1 per cent and 2.1 per cent respectively in 2004-05) representing the only statistically significant changes in relation to specific substances



Source: Crime Survey for England and Wales, 2015

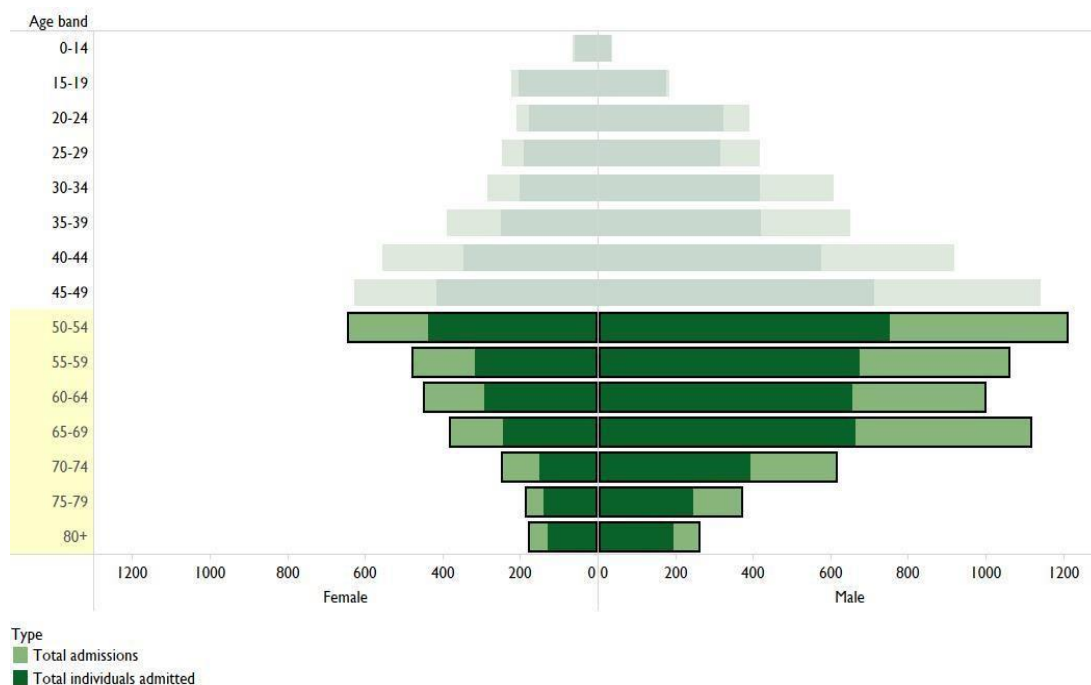
Chart 26: Percentage of individuals reporting use of illicit drugs in the past year, 16-59 year olds, Wales, 2010-11 to 2014-15

¹⁶ Further information on the Crime Survey for England and Wales, along with access to the data outlined within this document is available at [Crime in England and Wales, Year Ending March 2015 - ONS](https://www.gov.uk/government/collections/crime-in-england-and-wales)

7 Older adults (aged 50 years and above)

7.1 Hospital admissions for alcohol specific conditions, older adults (50+ years)

In 2014-15 there were 5,298 individual patients in the 50+ years age group admitted to hospital, accounting for a total of 8,168 admissions, equating to a mean of 1.54 admissions per individual. Age band and gender breakdowns as indicated in Chart 27.



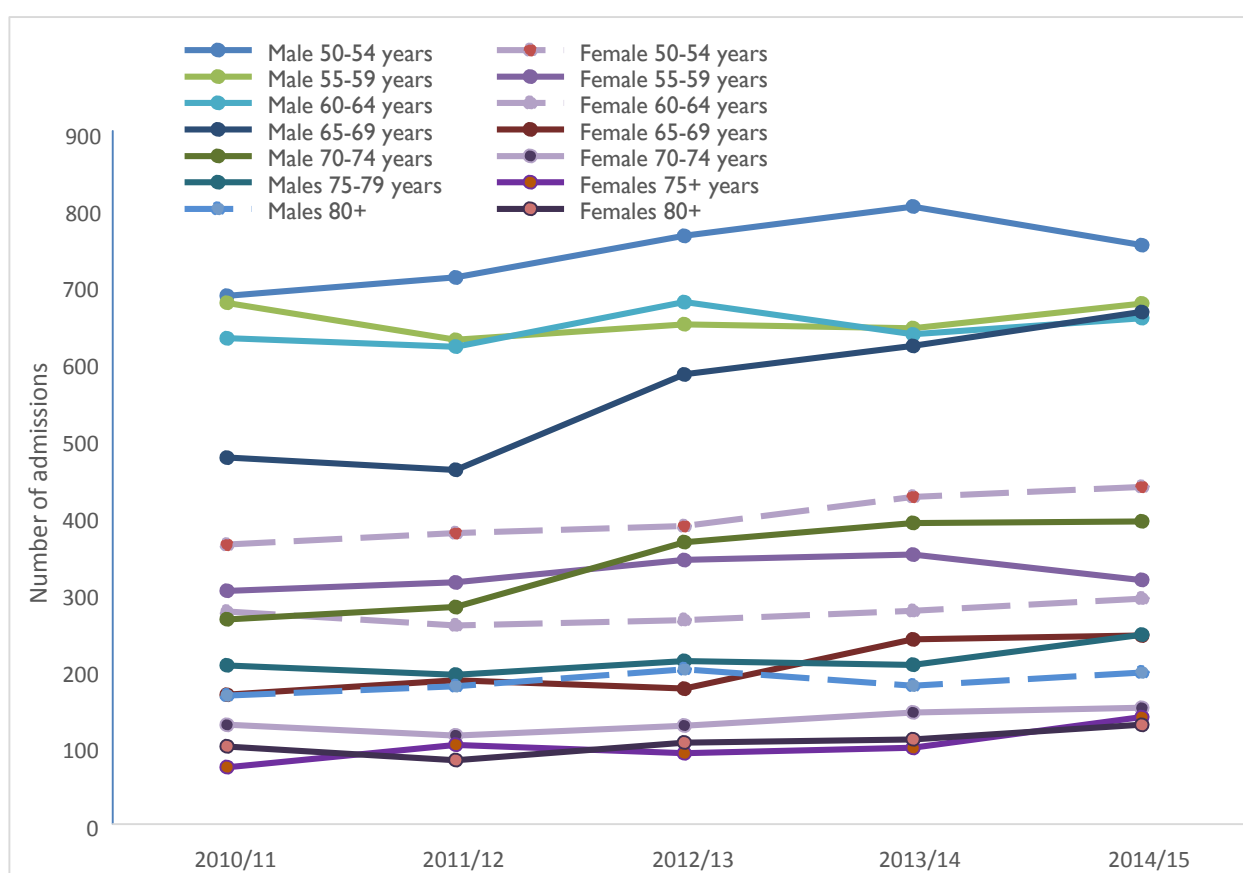
Source: Patient Episode Database for Wales, 2015

Chart 27: Hospital admissions for alcohol specific conditions in any diagnostic position, older adults aged 50+, by age band and gender, individuals and total number of admissions

Both measures; the number of individual patient admissions and the total number of admissions rose slightly in 2014-15 compared to the previous year, by 3.3 per cent and 1.1 per cent respectively. This was the third consecutive year in which individual patient admissions and the total number of admissions in this age group have increased, although the year on year rate of increase has slowed since 2012-13 when individual patient admissions increased by 9.7 per cent and total admissions by 7.3 per cent compared with the previous year. Trends in person based admissions by age group and shown in Chart 28.

The proportion of the 8,168 admissions of older people aged 50 years and over accounted for by admissions in which the alcohol specific diagnosis was in the primary position was 19 per cent. This is a substantially lower proportion than that observed for both young people aged under 25 and working age adults aged 25-49. Whilst this proportion has been lower

for this age group than for others over the past five years, it has fallen from 23.1 per cent in 2010-11; in other age groups the proportion of all admissions which were primary admissions has been stable over this period. There were no substantial differences between men and women in terms of individuals admitted or total number of admissions in 2014-15 compared with 2013-14. However, there were observable differences between five-year age bands, with the highest number of individual patient admissions and total admissions observed in the 50-54 age band, with numbers declining with each ascending age band except for a slight increase amongst men aged 65-69 compared with those aged 60-64. In general, the number of individuals admitted and total admissions increased compared with the previous year as age increased, with the 75-79 age bands showing the largest increase in individuals admitted for both sexes, (in those five-year age bands in which more than 100 individuals were recorded).



Source: Patient Episode Database for Wales, 2015

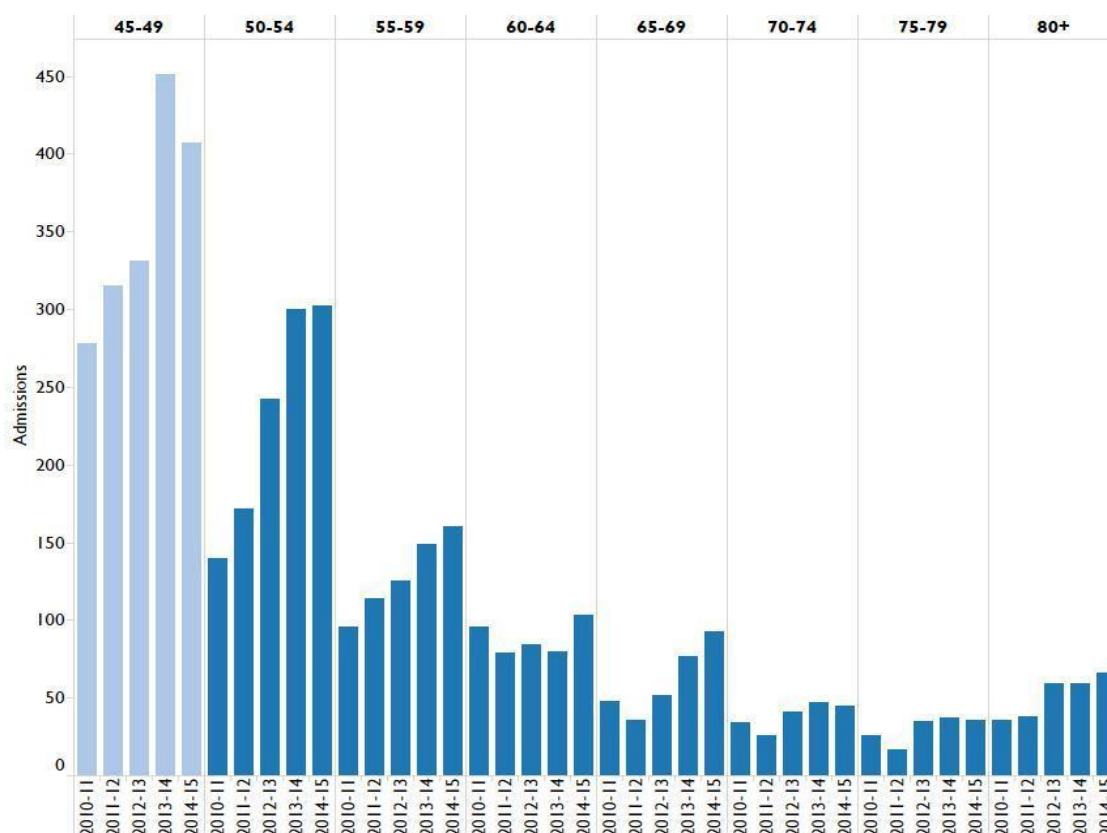
Chart 28: Hospital admissions for alcohol specific conditions in any diagnostic position, older adults aged 50+, by age band and gender, person based admissions, Wales 2010-11 to 2014-15

The proportion of all hospital admissions of those aged 50 and over which were psychiatric hospital admissions was 2.8 per cent, less than the comparable proportion for other age groups.

7.2 Hospital admissions for poisoning with named illicit drugs in older adults (50+ years)

In contrast to the two younger age groups, hospital admissions involving poisoning with a named illicit drug rose amongst those aged 50 and over compared with the previous year, by 2.9 per cent to 676 in terms of individuals admitted in 2014-15 and by 7.5 per cent to 805 in terms of total admissions.

As indicated in Chart 29, most age bands within the wider 50+ age group saw increases in the number of admissions involving a named illicit drug in 2014-15 compared to 2013-14. Indeed, admissions amongst those aged 50 and over have increased from 476 in 2010-11, a rise of 69.1 per cent, contrasting with admissions for those under 25 (amongst whom admissions have fallen by 3.8 per cent over the same period) and those aged 25-49 (with a rise of 15.9 per cent amongst this age group). The rises between 2013-14 and 2014-15 were almost entirely due to an increased number of admissions involving men, with a 13.9 per cent rise to 434 admissions compared with a 0.8 per cent rise to 371 admissions amongst women. However, the rises over five years also described above have been seen equally in men and women.



Source: Patient Episode Database for Wales, 2015

Chart 29: Hospital admissions for poisoning with an illicit named drug, any diagnostic position, by five year age band, 2010-11, older adults aged 50+

Chart 30 shows the number of admissions involving poisoning by an illicit named drug amongst those aged 50 and over by substance, opioids have played a considerable role in the rise in admissions. Whilst opioid related admissions are falling amongst those aged 25 or over and generally stable or rising slightly amongst those aged 25- 49, amongst those aged 50+ opioid admissions have increased year on year since 2011-12 with a 12.5 per cent increase from 2013-14 to 2014-15.

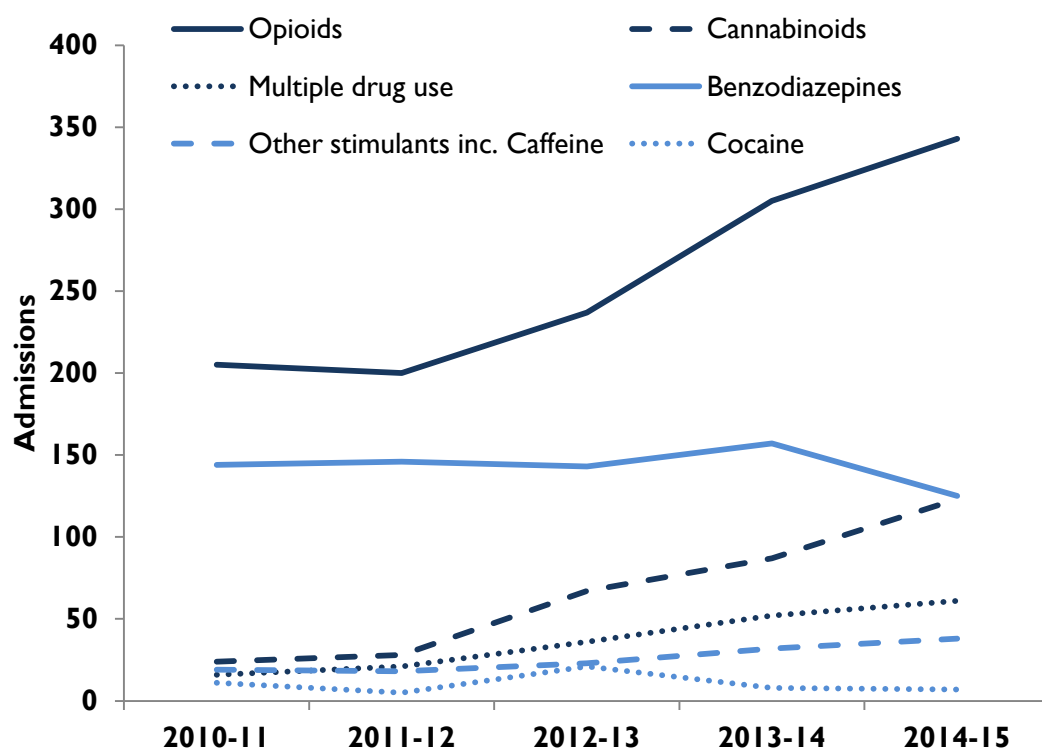


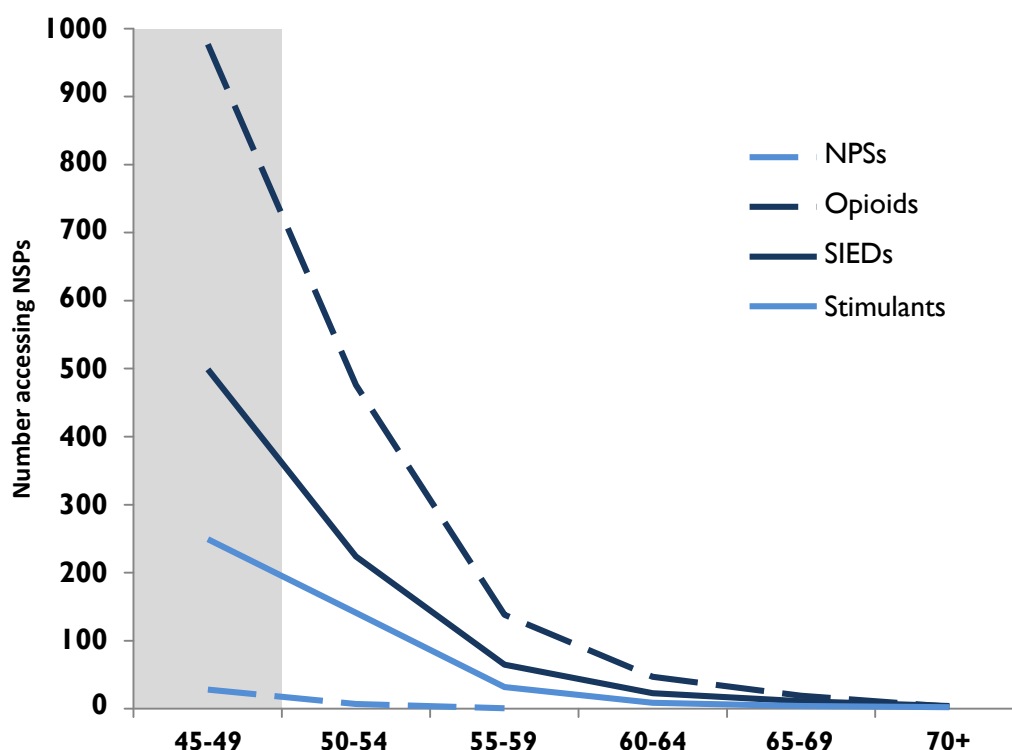
Chart 30: Hospital admissions for poisoning with a named illicit drug, any diagnostic position, most frequently reported substances, Wales 2010-11 to 2014-15, older adults aged 50+

It is also notable that, as with those aged under 25, but in contrast to those aged 25-49, increases in admissions related to cannabinoids have continued as in previous years, with 123 admissions recorded for those aged 50+ in 2014-15, an increase of 41.1 per cent compared with 2013-14.

The proportion of all admissions accounted for by admissions to psychiatric hospitals was 4.6 per cent (substantially lower than the proportions recorded in the other age groups) and the proportion of admissions in which the named illicit drug was noted in the primary position was 41 per cent (lower than for under 25s; higher than for those aged 25-29).

7.3 Individuals accessing Needle and Syringe Programmes, older adults (50+ years)

Of the 1,218 individuals recorded on the Harm Reduction Database¹⁷ aged 50 or older, 1,088 were men; 89.3 per cent of all those accessing in that age group. Notably, even when SIEDs are excluded, the proportion of all those accessing in this age group is still 88.3 per cent male. The 50+ years age band also differs from both the younger people and working age groups because opioids are the most frequently self-reported drug by 688 individuals (56.5 per cent) of those accessing NSP services as shown in Chart 31. Within the five-year age bands, 69.6 per cent of all those aged 50+ who accessed an NSP in Wales in 2014-15 were aged between 50-54 years, and a further 19.4 per cent were aged 55-59 years. Only 11 per cent of all those accessing NSPs were aged 60 or over.



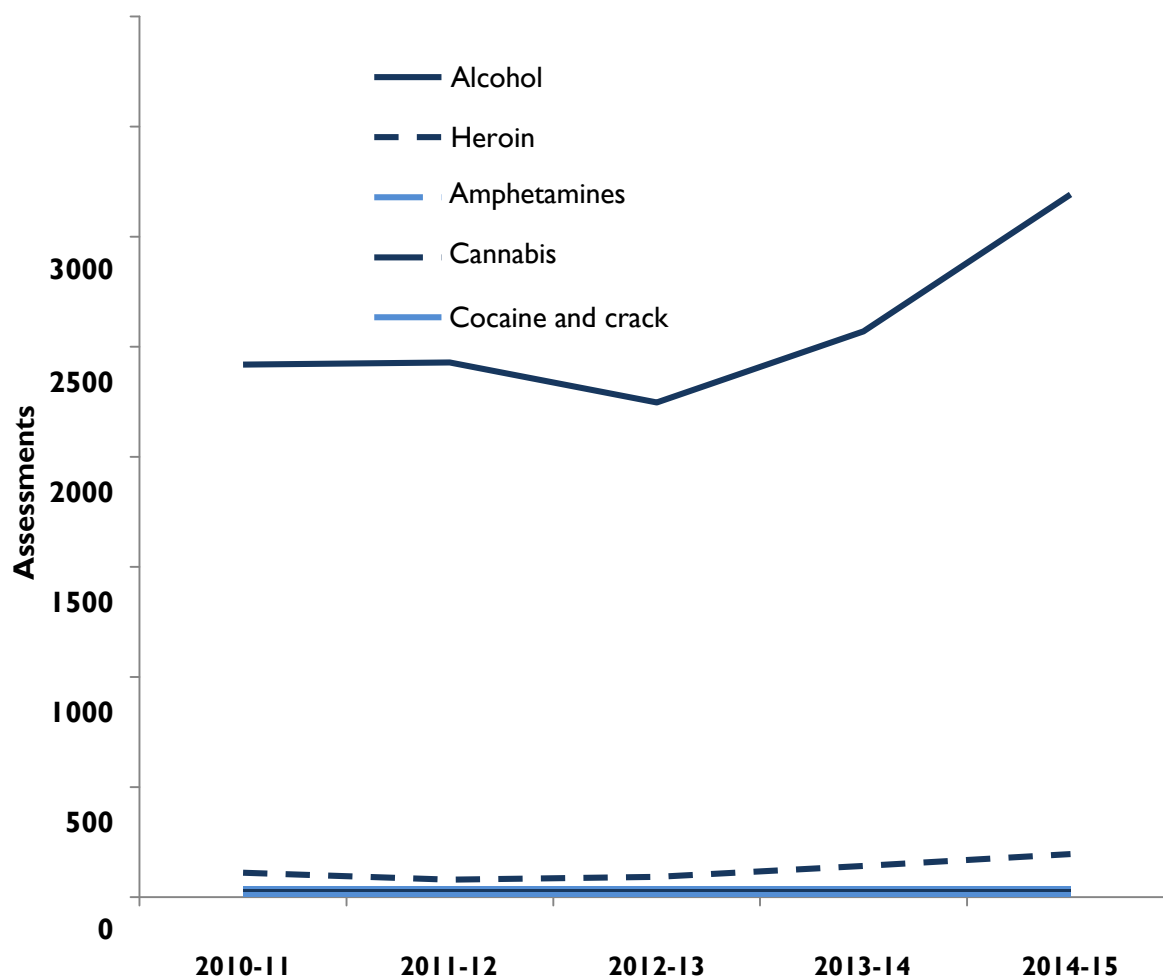
Source: Harm Reduction Database, 2015

Chart 31: Number of older adults aged 50+ who inject drugs accessing NSP services by primary substance type and age band in Wales, 2014-15

¹⁷ Harm Reduction Database, see Section 5.2.4

7.4 Assessment by substance misuse treatment services, older adults (50+ years)

Amongst the older age group (50 years+), alcohol remains the substance most commonly reported at assessment stage within specialist substance misuse treatment services as shown in Chart 32. In 2014-15, there were a total of 3355 assessments for alcohol, an increase of 22.7 per cent from 2013-14 and 29.9 per cent over the five-year period since 2011-12. Whilst the numbers are substantially lower, assessments for primary problematic heroin use also rose in 2014-15 amongst this age group from 142 to 195, an increase of 37.3 per cent. Assessments for amphetamine, cannabis and cocaine remain low.



Source: Welsh National Database for Substance Misuse, 2015

Chart 32: Number of assessments in specialist substance misuse treatment services by older adults aged 50+ five most frequently reported primary substances of use, Wales, 2010-11 to 2014-15

8 Injecting drug use: risk behaviours and blood borne viruses

Injecting drug use is the single greatest risk factor for infection with hepatitis C. The risks associated with sharing injecting equipment and the sources of data on those risks, principally the Unlinked Anonymous Monitoring (UAM) survey and the Harm Reduction Database (HRD) for Wales, are described in section 5.2.

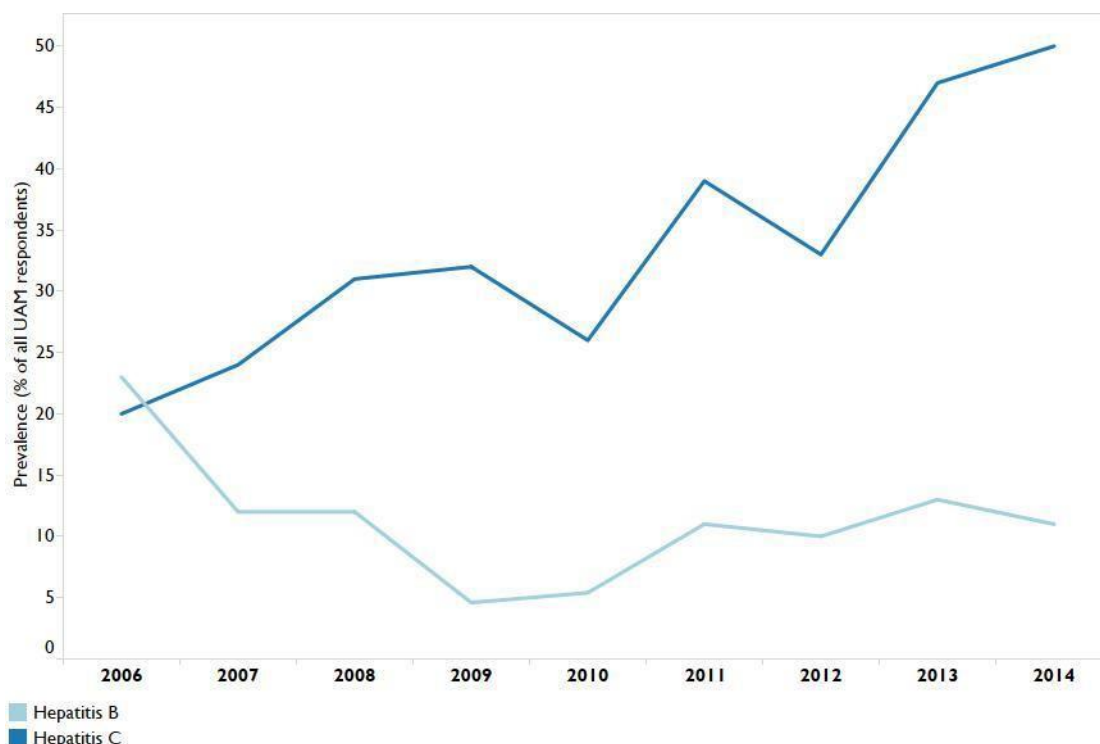
8.1 Direct and indirect sharing

According to the latest figures from the UAM survey, 34 of 158 respondents (22 per cent) reported direct sharing (i.e. sharing of needles or syringes) in the previous four weeks, an increase of 1 percentage point on the previous year. When direct and indirect (i.e. sharing of injecting paraphernalia other than needles and syringes) are considered together, the number reporting this risk behaviour in the past four weeks in Wales in 2014 was 41 per cent (66 of 162 respondents).¹⁸ These figures compare with 16 per cent of respondents in England reporting direct sharing and 38 per cent reporting direct or indirect sharing, with both proportions relatively stable over recent years.

8.2 Prevalence of BBVs amongst people who inject drugs in Wales and uptake of hepatitis B vaccination

The UAM tests dry blood spot (DBS) samples provided anonymously by people who inject drugs (PWID) and attend services. There were 270 samples provided by Welsh PWID service users in 2014, of which 11 per cent were positive for hepatitis B and 50 per cent were positive for hepatitis C. These proportions reflected a fall of 2 percentage points and a rise of 3 percentage points respectively on 2013 and compared with 15 per cent and 50 per cent of respondents in England. Of the 256 respondents who answered the question relating to hepatitis B vaccine uptake, 76 per cent reported having at least one dose of hepatitis B vaccine. Chart 33 shows the percentage of respondents to the UAM providing samples that were positive for hepatitis B and hepatitis C between 2009 and 2014.

¹⁸ Data tables of the Unlinked Anonymous Monitoring Survey of HIV and Hepatitis in People Who Inject Drugs. Surveillance Update July 2015. Available at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/442794/UAM_Survey_of_PWID_data_tables_2015_07_07_15_FINAL.pdf



Source: Public Health England, 2015

Chart 33: Percentages of respondents to the Unlinked Anonymous Survey in Wales providing samples positive for hepatitis B and C, 2006-2014

8.3 Prevalence of HIV infection amongst people who inject drugs

Of the 270 Welsh PWID reporting to the UAM, 1.1 per cent were positive for HIV. This represented an increase on the previous year when 0.5 per cent of samples tested positive. According to figures produced for the UK and regions by Public Health England¹⁹, with the co-operation of Public Health Wales, there were 132 new diagnoses of HIV in Wales in 2013, a rise of 10 per cent on 2012. The report noted that, for the first time since 2009, none of these new HIV infections were believed to be as a result of injecting drug use.

8.4 Injecting site infection

There was a notable rise in the percentage of UAM respondents reporting any symptom of injecting site infection in 2014, at 35 per cent (67 of 193 individuals) compared with 29 per cent in 2013. This was higher than the comparable figure for England, which was 31 per cent.

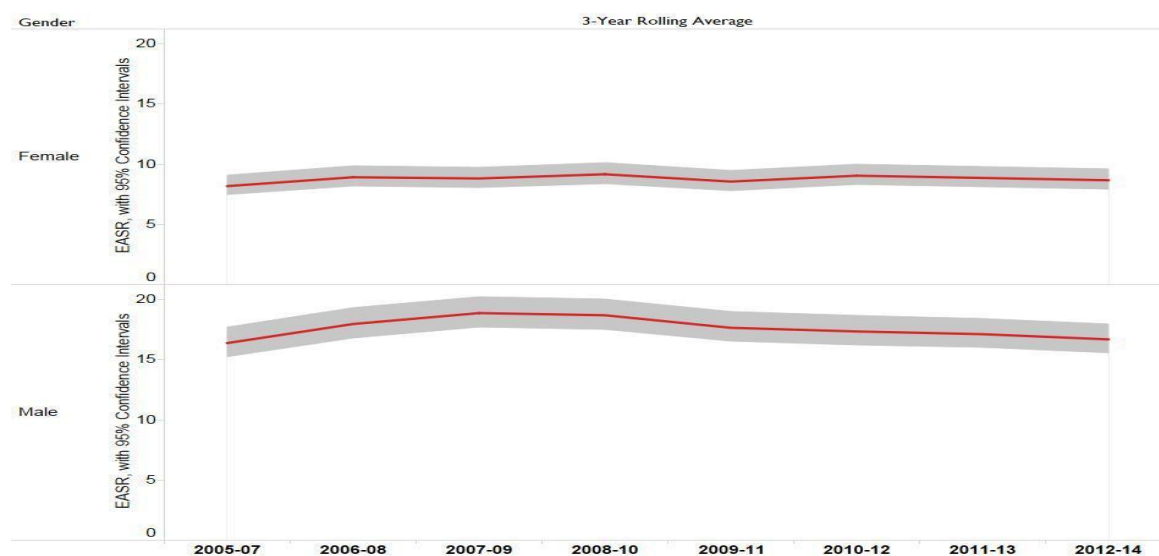
¹⁹ Full report and data tables can be found here: <https://www.gov.uk/government/statistics/hiv-data-tables>

9 Alcohol related deaths

9.1 Alcohol related deaths over time

According to data from the Office for National Statistics (ONS), there were 459 alcohol related deaths²⁰ registered in Wales in 2014, representing a fall of 1.7 per cent compared with 2013 when 467 deaths were registered. Following the substantial fall (16.6 per cent) in the number of deaths registered amongst females between 2012-13 and 2013-14, as detailed in last year's annual profile report²¹, the number of alcohol related deaths registered by gender was relatively stable between 2013 and 2014, with 295 male deaths and 164 female deaths, a fall of 3.6 per cent and 1.9 per cent respectively.

Over the longer term, using 3 year rolling averages rather than annual counts, the evidence presented in Chart 34 indicates that the rate of alcohol related deaths amongst men have declined slightly over recent years to 16.7 per 100,000 for the period 2012-14, but the rate of alcohol related deaths amongst women, at 8.7 per 100,000 in the period 2012-14 has seen no notable change. However, the alcohol related death rate amongst males remains more than twice the rate observed amongst females.



Source: Office for National Statistics, 2015

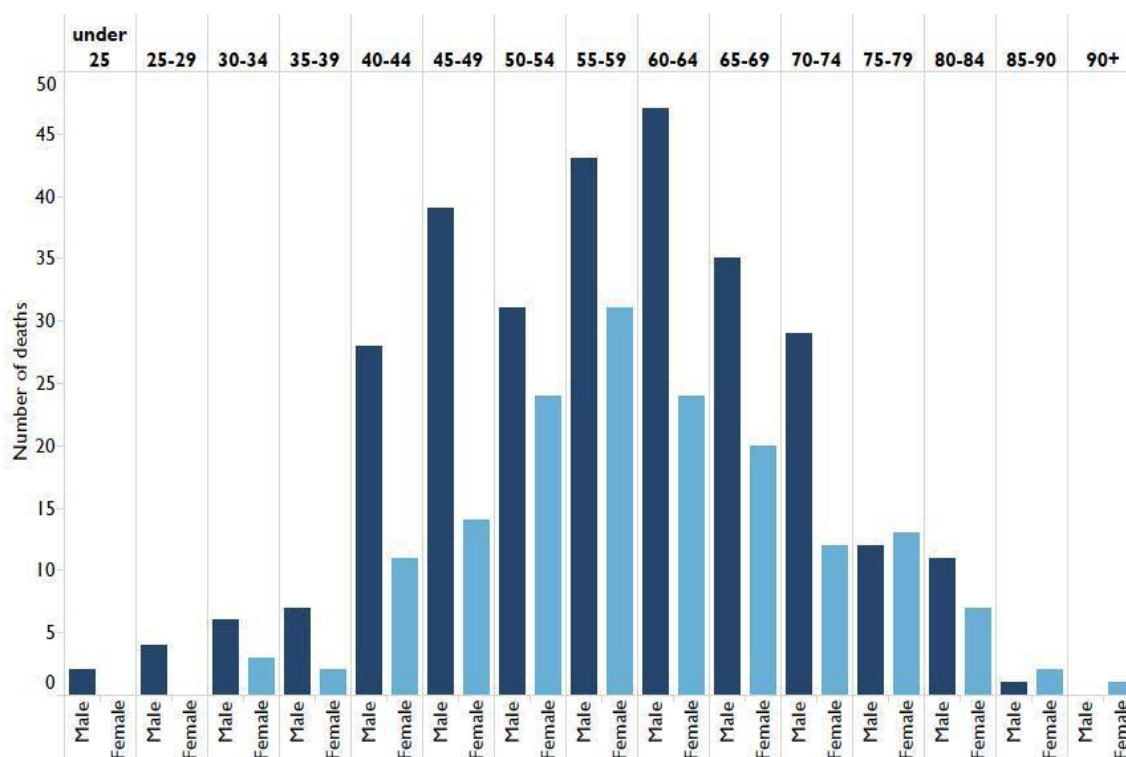
Chart 34: European age standardised rates of alcohol related deaths per 100,000 population, 3 year rolling averages including 95% confidence intervals, by gender, Wales, 2005-07 to 2012-14

²⁰ 'Alcohol related deaths' are those deaths for which the death record indicates that an alcohol specific condition was the underlying cause of death. See Appendix 2 for a detailed explanation of alcohol related deaths

²¹ Reading between the lines: Annual Profile of Substance Misuse for Wales 2013-14. Available at: [http://www2.nphs.wales.nhs.uk:8080/SubstanceMisuseDocs.nsf/85c50756737f79ac80256f2700534ea3/3cb5cd6327397b2280257e0c0033fd9b/\\$FILE/The%20Annual%20Profile%20of%20Substance%20Misuse%20in%20Wales%202013-14.pdf](http://www2.nphs.wales.nhs.uk:8080/SubstanceMisuseDocs.nsf/85c50756737f79ac80256f2700534ea3/3cb5cd6327397b2280257e0c0033fd9b/$FILE/The%20Annual%20Profile%20of%20Substance%20Misuse%20in%20Wales%202013-14.pdf)

9.2 Alcohol related deaths in 2014 by age, gender and Health Board area in Wales

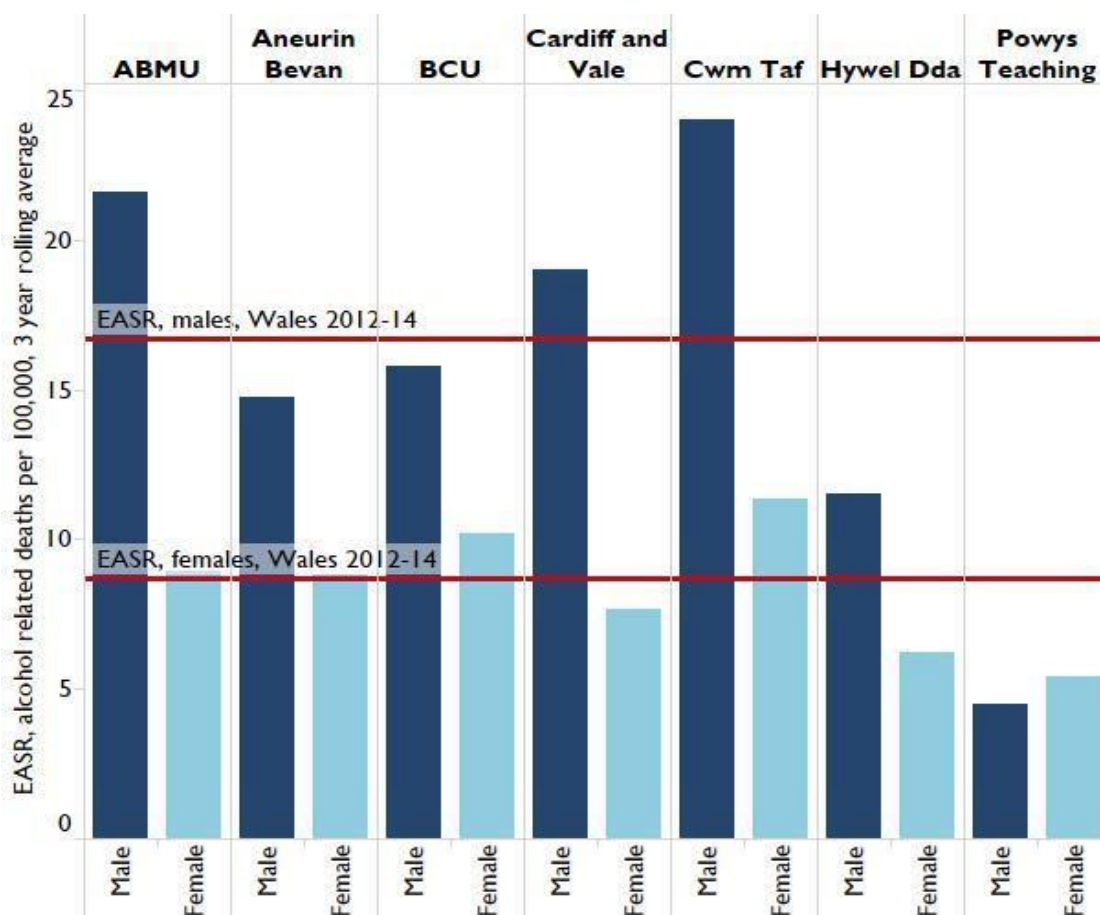
The majority of alcohol related deaths were registered in those aged 55-59 years with 74 deaths (15.5 per cent of all deaths) as indicated in Chart 35; this represented a change from 2013, when the most frequently registered age band was 60-64 years. However, perhaps the most important point to note in the distribution of deaths is in the proportionate decline of the number of deaths amongst women under 50 years, accounting for 18.3 per cent of deaths amongst women in 2014, compared with 26.7 per cent in 2013. Deaths amongst men under 50 represented 29.2 per cent of all deaths registered in 2014, comparable with the 29 per cent registered in 2013.



Source: Office for National Statistics, 2015

Chart 35: Alcohol related deaths registered in Wales, 2014, by age band and gender

As in previous years, there was considerable variation between Health Board areas in the age standardised rates of alcohol related deaths. Chart 36 details the differences between Health Board areas by gender, using standardised rates and 3 year rolling averages, presenting a picture that is stable over recent years.



Source: Office for National Statistics, 2015

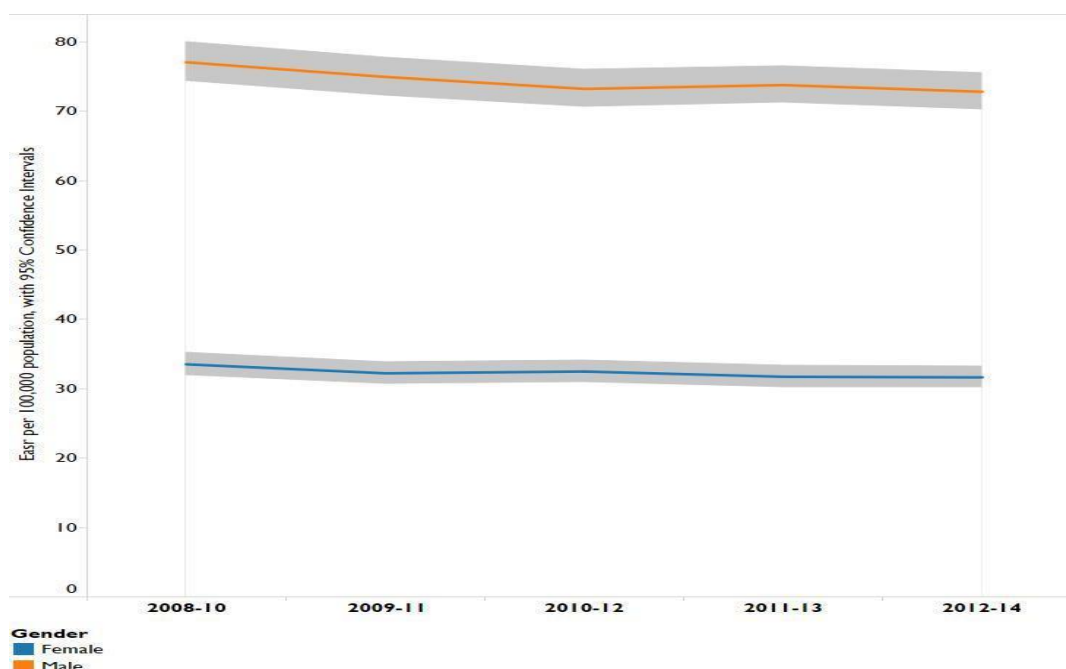
Chart 36: European age standardised rates of alcohol related deaths, 3 year rolling average for 2012-14, by gender and Health Board area in Wales

The standardised rate of alcohol related deaths in Wales for men in 2014 was 16.7 per 100,000 population and for women the figure was 8.7 per 100,000. For context, the most recent available figures for England (2013) were 17.8 per 100,000 amongst men and 8.7 per 100,000 amongst women; however, these were calculated on the basis of a single year and are not therefore directly comparable with the data presented above.

Powys Teaching had the lowest rates (4.5 per 100,000 for men and 5.4 for women) but is also the only Health Board area with a higher rate of alcohol related deaths amongst women compared to men. Cwm Taf has the highest rates for both men (24 per 100,000) and women (11.4 per 100,000). In general, rates of alcohol related death were higher in South Wales, with the ABMU, Cwm Taf and Cardiff and Vale areas having rates of alcohol related deaths above the rate reported for Wales as a whole. There was no comparable geographic concentration amongst women, with the highest rate of alcohol related deaths amongst women, after Cwm Taf, reported in the BCU (North Wales) area (10.2 per 100,000).

9.3 Alcohol attributable mortality

As described briefly in Section 3.1 and in more detail in Appendix I, in addition to presenting counts and population rates of individuals affected by 'alcohol specific' conditions (where the condition is by definition entirely due to consumption of alcohol) figures can also be derived to describe rates of 'alcohol attributable' conditions; those to which alcohol can contribute, when considered across the whole population²².



Source: Patient Episode Database for Wales, 2015

Chart 37: European age standardised rates of alcohol related deaths per 100,000 population, 3 year rolling averages including 95% confidence intervals, by gender

Chart 37 shows substantially higher standardised rate of deaths per 100,000 population in Wales can be attributed to alcohol when conditions partially related to alcohol are taken into account. The rate of deaths in males rises by more than four times to 77 per 100,000, whilst for women the rate more than trebles to 31.6 per 100,000.

As with standardised rates for deaths from alcohol specific conditions, the rate for men appears to be declining over the period, whilst the rate for women appears relatively stable. The ratio of the rate of male to female alcohol attributable deaths, at 2.4:1 is higher than the comparable ratio for deaths from alcohol specific conditions, which is 1.9:1.

²² 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>

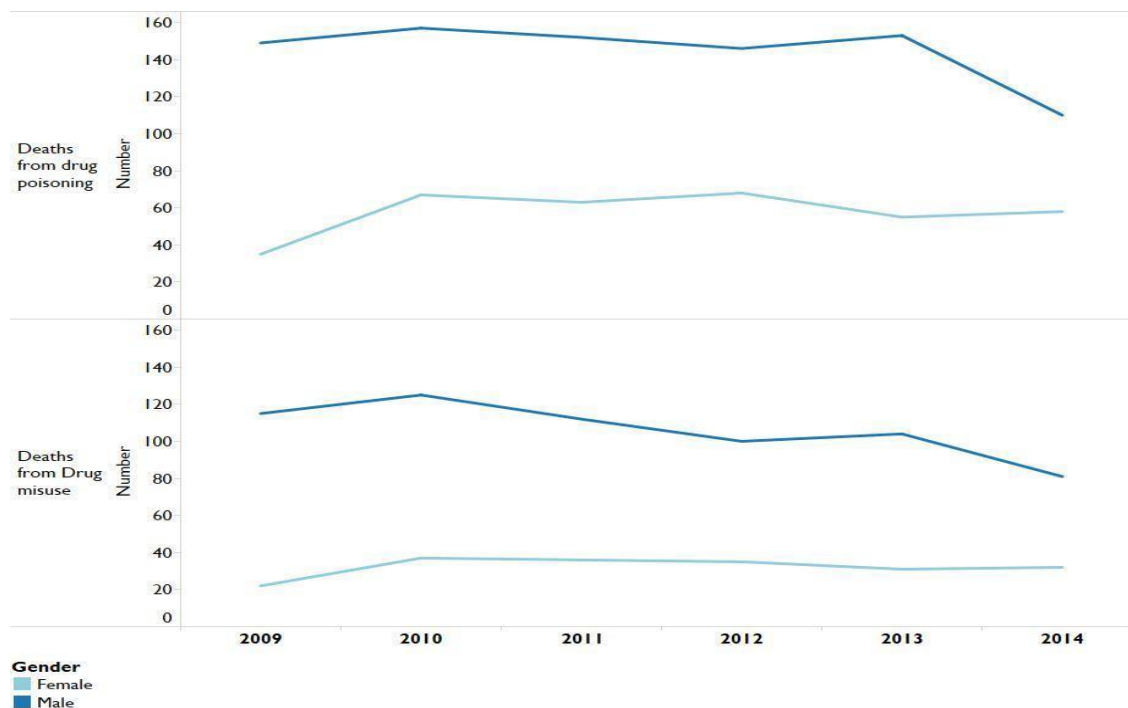
10 Drug related deaths

The Office for National Statistics (ONS) reports two main measures in relation to drug deaths: '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), whilst 'Deaths related to drug misuse' is the subset of drug poisoning deaths involving illicit drugs. A more detailed description of these measures is provided in Appendix 4

10.1 Deaths by drug poisoning and drug misuse deaths by gender

There was a substantial fall in the number of drug related deaths in Wales in 2014, from 208 deaths to 168 for drug poisonings (19.2 per cent) and from 135 deaths to 113 for drug misuse (16.3 per cent). This is in marked contrast to the trends in drug deaths elsewhere in the UK, in particular in England, where deaths from drug poisoning (up 15.4 per cent) and drug misuse (up 17 per cent) both showed substantial rises for the second year in a row.

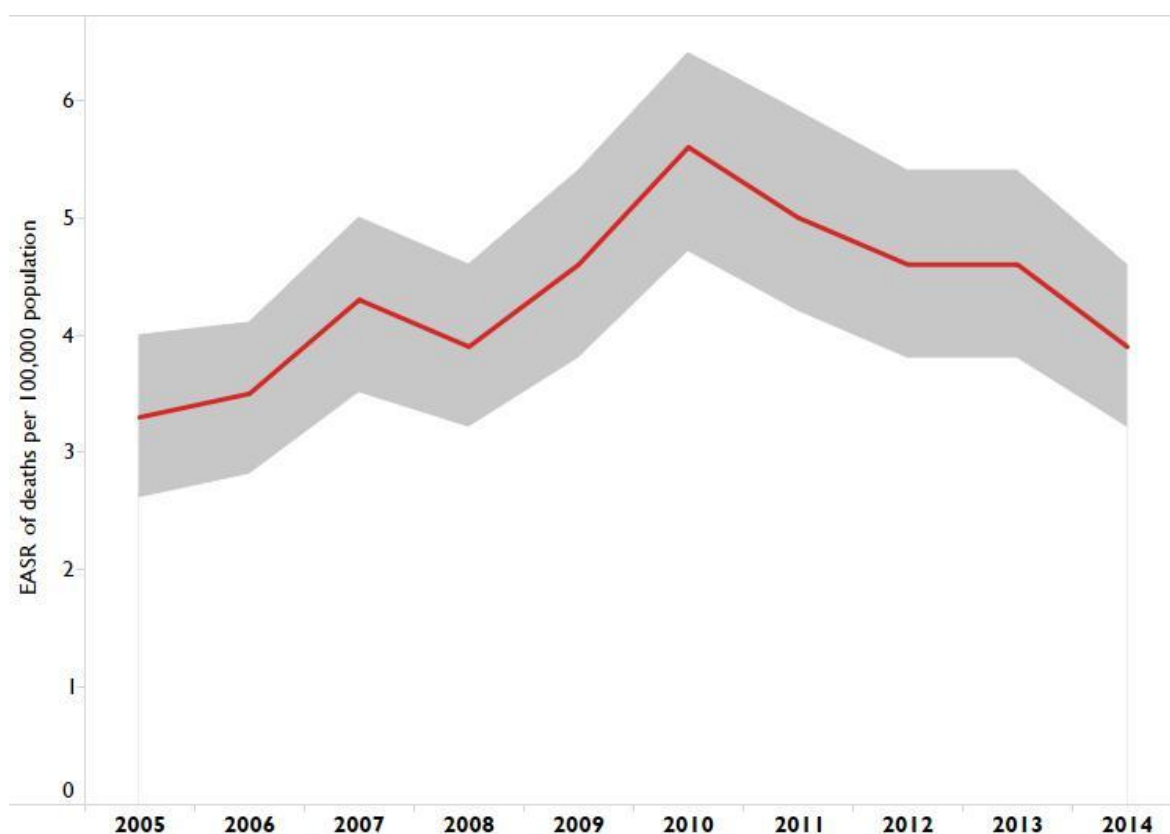
The fall in drug misuse deaths in Wales was accounted for almost entirely by changes in drug deaths amongst men, which fell from 104 deaths in 2013 to 81 in 2014, a fall of 22.1 per cent. Chart 38 shows changes in deaths from drug poisoning and drug misuse in Wales by year and gender.



Source: Office for National Statistics, 2015

Chart 38: Drug related deaths (drug poisonings and drug misuse deaths) registered in Wales, by gender, 2009 to 2014

The decreases in drug deaths mean that the standardised (EASR²³) rate for deaths by drug misuse in Wales in 2014 (3.9 deaths per 100,000 population) was lower than that for England (3.97 per 100,000) for the first time since 2004²⁴. Analysis of the standardised rates further illustrates how substantial the falls in drug related deaths in Wales have been in recent years, with rates of deaths from drug misuse per 100,000 population having reached as high as 5.55 per 100,000 population in 2010 when there were 162 deaths. Chart 39 shows standardized rates of drug misuse deaths in Wales over time.



Source: Office for National Statistics, 2015

Chart 39: Standardised (EASR) rates of drug misuse deaths in Wales, 2005-2014, with 95% confidence intervals

10.2 Drug misuse deaths by substances reported

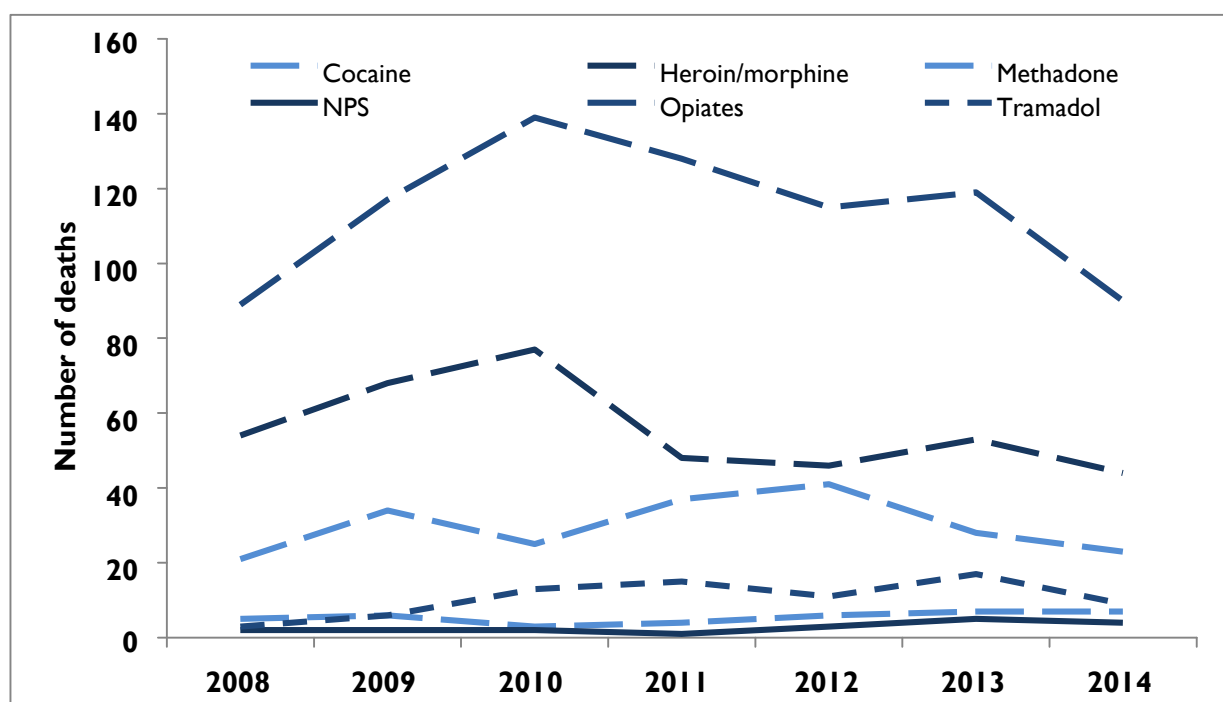
Further analysis of drug misuse deaths data offers additional insights into possible reasons for the falls in drug related deaths in Wales over the period. There were notable falls in the number of deaths in which heroin/morphine and methadone (the two opioids typically mentioned most frequently in death records) were recorded in deaths registered in 2014. Heroin/morphine was recorded in 44 cases in 2014, compared with 53 cases in 2013, a fall

of 17 per cent. Mentions of methadone fell by 17.9 per cent from 28 to 23 cases. In relation to opioids, it is also worthy of note that deaths involving tramadol, which rose between 2012 and 2013 almost halved in the subsequent year, from 17 to 9.

²³ European Age Standardised Rate, see Appendix 6

²⁴ Office for National Statistics (2015) Drug related deaths in England and Wales, 1993-2014, http://www.ons.gov.uk/ons/dcp171778_414574.pdf

These substantial falls in the number of drug misuse deaths involving opioid drugs – an overall drop across all opioid substances of 24.4 per cent, from 119 mentions in 2013 to 90 in 2014 – can also be contrasted with statistics recorded across England. In 2014, the number of deaths in which heroin/morphine was mentioned on the death record rose from 712 to 908 (27.5 per cent), although changes were not so marked in other categories of opioids. Deaths in which methadone was mentioned did fall across England. Two main hypotheses have been advanced to explain this sharp rise in deaths. The first is that heroin purity levels have increased over the period 2012-14 whilst street prices have fallen²⁵. The second is that heroin users are an aging cohort amongst whom an increasing number might be expected to die year-on-year. Welsh data does not support these hypotheses. There is no evidence that purity levels in Wales are markedly different to those in England over time; however, deaths from heroin/morphine have fallen in Wales whilst rising sharply in England. Further, whilst the numbers of individuals aged 50 and over with a recorded drug misuse death with heroin/morphine mentioned on the death record has increased across England from 122 in 2013 to 172 in 2014, a rise of 41 per cent, the comparable figures for Wales only showed a fall from 9 individuals aged 50 years and over in 2013 to 5 in 2014. This analysis suggests alternative explanations for changes in opioid related drug misuse deaths by region / country over time should be considered. Chart 40 shows changes in the number of individuals registered as dying from drug misuse for whom specified substances were recorded in the death record over time.



Source: Office for National Statistics, 2015

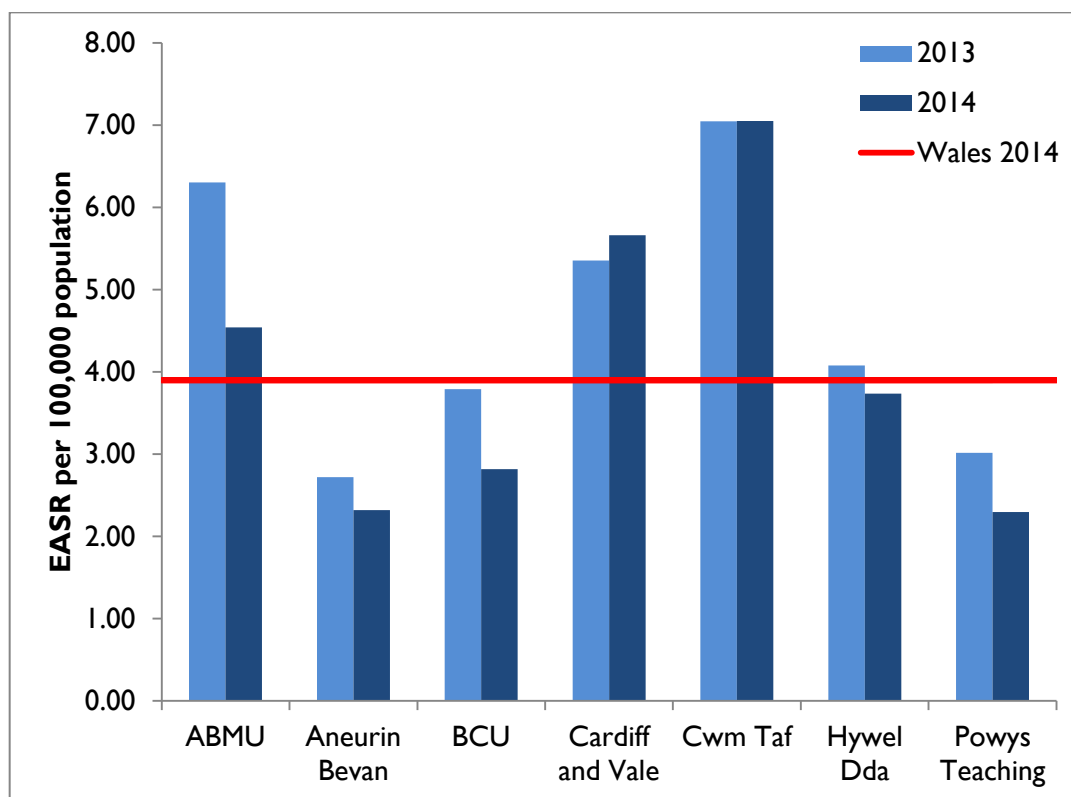
Chart 40: Drug misuse deaths registered in Wales, in which selected substances were mentioned

²⁵ Office for National Statistics (2015) Drug related deaths in England and Wales, 1993-2014, http://www.ons.gov.uk/ons/dcp171778_414574.pdf

In addition to illustrating the trends in relation to specific opioids, as described above, Chart 40 also includes data on deaths in which cocaine and new psychoactive substances (NPS) were mentioned. Deaths from drug misuse in Wales in which cocaine was mentioned on the death record have remained stable in recent years, with seven recorded in both 2013 and 2014. Again, this is in notable contrast to other areas, with England recording a substantial rise of 48.1 per cent between 2013 and 2014 to 240 deaths.

10.3 Drug misuse deaths by Health Board area

As shown in Chart 41, all Health Board areas saw falls in the European Age Standardised Rate of drug related deaths registered over the time period, with the EASR for Wales as a whole falling from 4.6 per 100,000 to 3.9 per 100,000. Although the greatest number, 25 drug related misuse deaths, were seen in Cardiff and Vale Health Board area, the highest EASR per 100,000 population was recorded for a second successive year in Cwm Taf, where the rate was 7.1 per 100,000 population. Powys Teaching Health Board area had the lowest rate of drug misuse deaths in Wales with 2.3 deaths per 100,000 population in 2014.

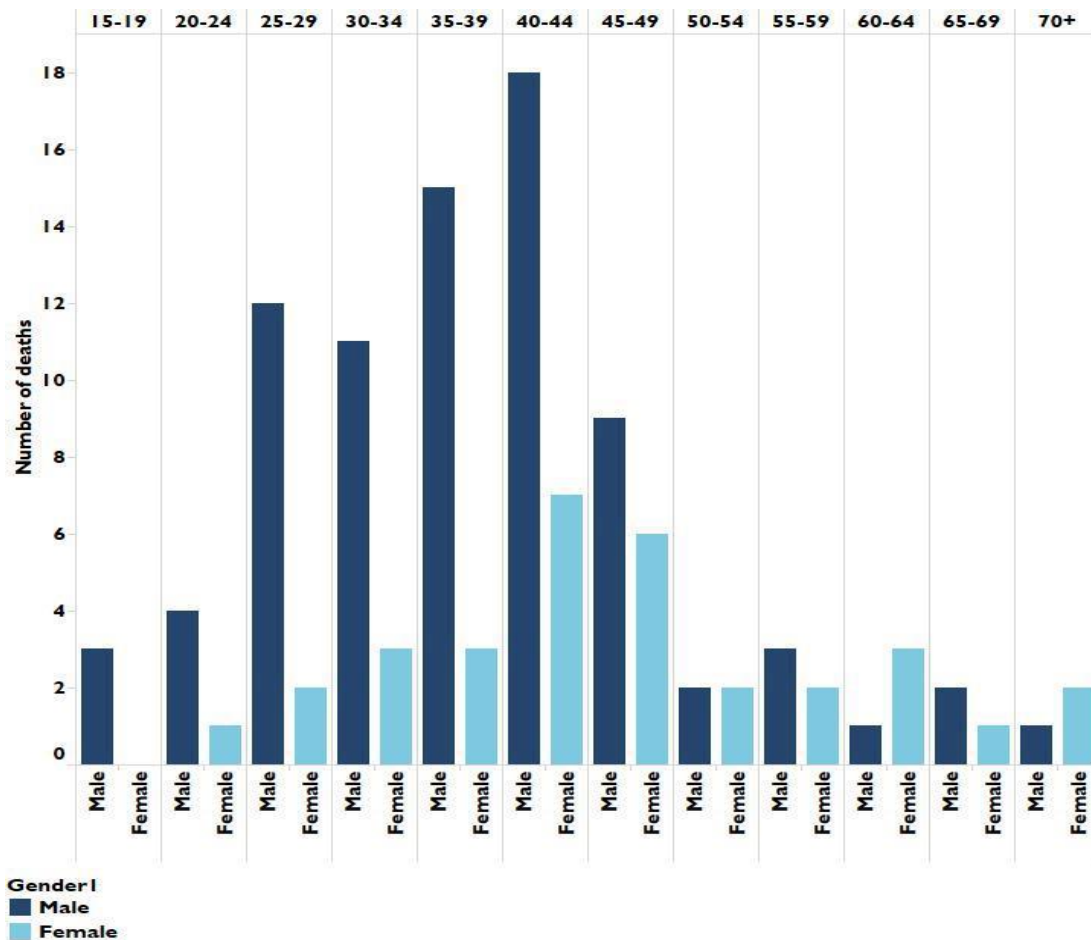


Source: Office for National Statistics, 2015

Chart 41: Drug misuse deaths registered in 2013 and 2014 by Health Board area, European Age Standardised Rate per 100,000 population

10.4 Drug misuse deaths by age and gender 2014

Of the 113 drug misuse deaths in Wales in 2014, 80 were in males accounting for 70.8 per cent. 75 per cent (85 deaths) occurred in those aged between 25-49 as shown in Chart 42.



Source: Office for National Statistics, 2015

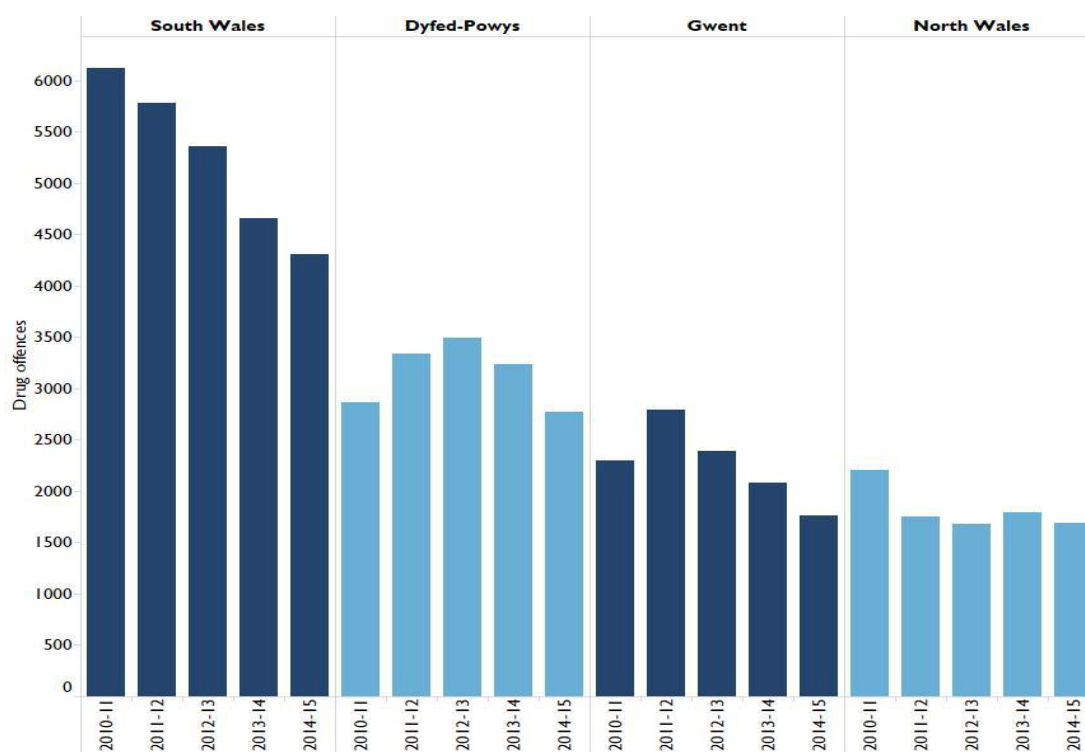
Chart 42: Drug misuse deaths registered in Wales, 2014, by age band and gender

The age band in which drug misuse deaths were most frequently registered for both genders was 40-44 years old, with the deaths of 18 men and 7 women recorded. This represents a change from the pattern seen in 2013, where deaths of men between the ages of 30 and 34 were most frequently registered, whilst for women the equivalent age band was 45-49. There were fewer deaths registered amongst both men and women between the ages of 25 and 34 compared to 2013.

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

11.1 Recorded drugs offences in Wales

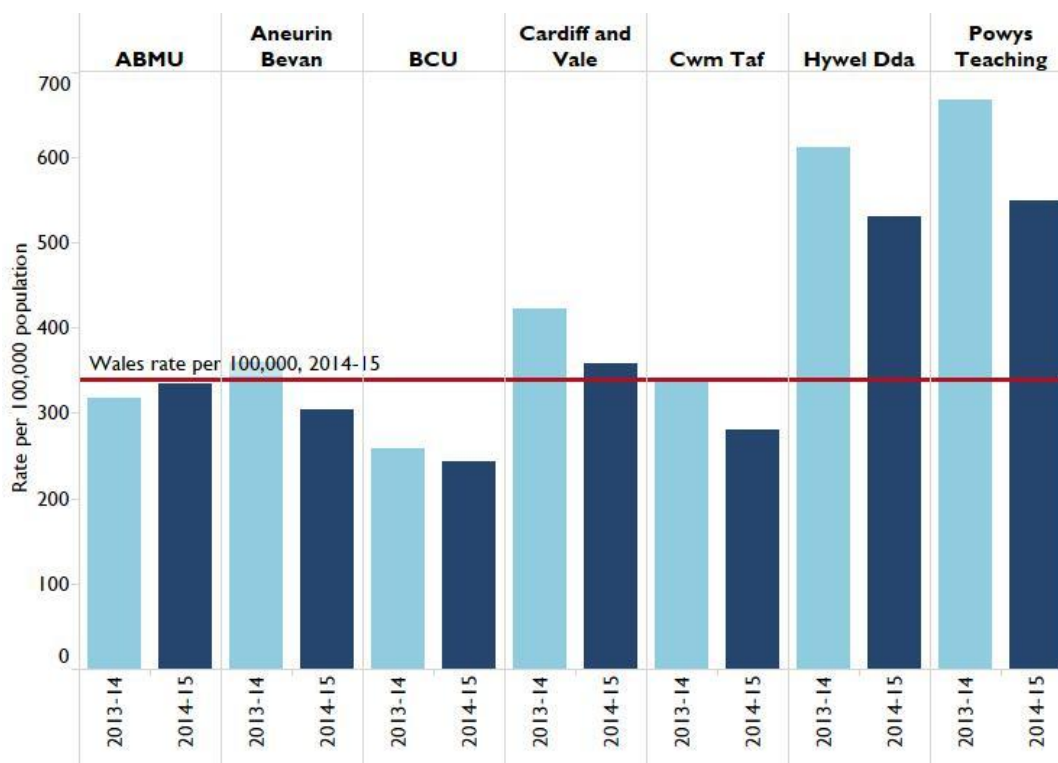
Across Wales, police forces recorded 10,526 drugs offences in 2014-15. This represented a fall of 1,240 (10.5 per cent) on the previous period and reflects a consistent year-on-year decline in the number of drug offences recorded. South Wales continues to record the most drug offences of all Welsh forces, as shown in Chart 43, but this number has declined every year since 2010-11, with 4,311 recorded in 2014-15 representing 29.6 per cent fewer recorded drug offences compared with 2010-11. Proportionately, Gwent saw the largest fall in recorded drug offences (15.4 per cent) closely followed by Dyfed Powys (14.4 per cent).



Source: Office for National Statistics, 2015

Chart 43: Number of drug offences recorded by Welsh police force, by year, 2010-11 to 2014-15

Further insights into changes in the number of recorded drugs offences over time can be found by exploring changes in the rates of offences. This is shown in Chart 44, with the data re-organised to reflect Health Board areas.



Source: Office for National Statistics, 2015

Chart 44: Police recorded drugs offences, rate per 100,000 population, by Welsh Health Board area, 2013-14 and 2014-15

Chart 44 plots the recorded drug offences by Health Board areas against the overall rate for Wales (340 per 100,000 population) and illustrates variation between different areas of South Wales when they are disaggregated from the wider area covered by the South Wales Police Force. AMBU is the only area in which the rate of recorded offences is rising, although the rate is still below that of Cardiff and Vale, which continues to have the highest (although falling) rate amongst the urban regions of South Wales. Rates for most other Health Board areas show some consistency year-on-year, with BCU (the only Health Board area coterminous with a police force area, in this case North Wales) continuing to maintaining a relatively stable low rate of recorded drug offences, below the national rate and Hywel Dda (531 recorded drug offences per 100,00 population) and Powys Teaching (550) remaining the Health Board areas with the highest rates of recorded drug offences.

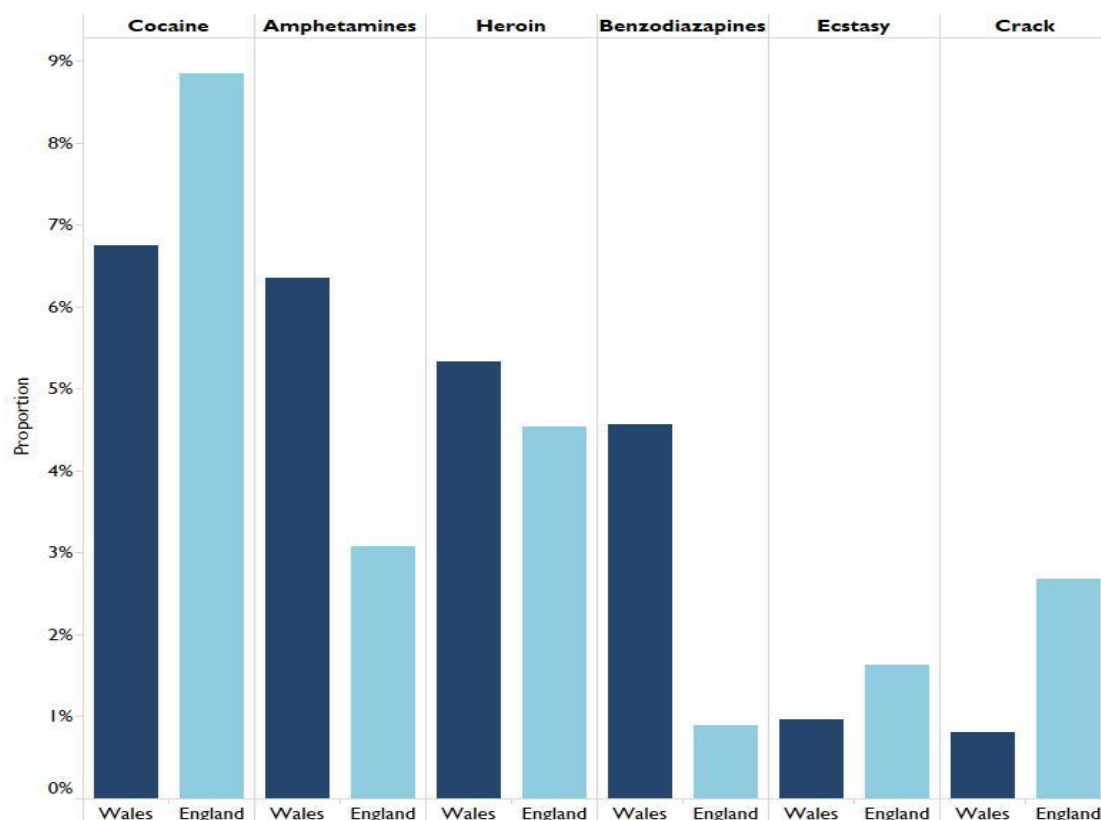
11.2 Seizure of illicit drugs in Wales

There were 11,282 seizures of illicit drugs by Welsh police forces in 2013-14, the most recent period for which data are available²⁶. This represents a fall of 8.6 per cent compared with the period 2012-13. As in previous years, and other parts of the UK, the drug most

²⁶ Note that data are unavailable for Gwent police for two months of the 2013-14 period.

frequently reported as seized was cannabis, with 8,298 seizures involving cannabis (73.6 per cent of all seizures). This represented a lower proportion of seizures than reported for England (78.2 per cent). Wales also saw a lower proportion of seizures than recorded for England in 2013-14 for a range of other drugs, including cocaine (761 seizures in Wales, 6.7 per cent of all seizures compared with 8.8 per cent across England) and crack (91 seizures in Wales, 0.8 per cent of all seizures compared with 2.7 per cent of all seizures in England)²⁷. However, heroin (601 seizures, 5.3 per cent of all seizures), amphetamines (717 seizures, 6.4 per cent) and benzodiazepines (515 seizures, 4.6 per cent) all represented a greater proportion of seizures in Wales than they did in England, where the comparable figures were 4.5 per cent for heroin, 3.1 per cent for amphetamines and 0.9 per cent for benzodiazepines.

Chart 45 compares the proportion of recorded seizures compared with all seizures for selected drugs between England and Wales.



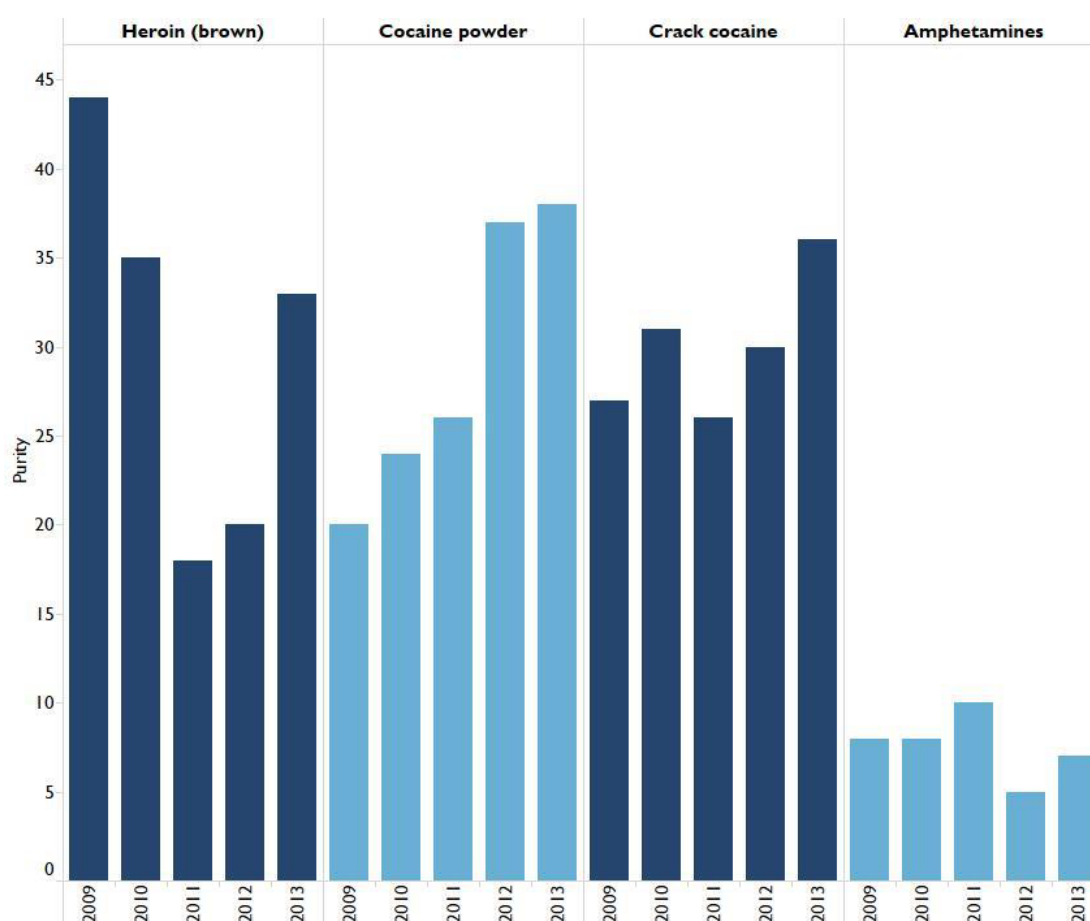
Source: Home Office, 2014

Chart 45: Proportion of all seizures involving selected drugs, England and Wales, 2013-14

²⁷ Note that a recorded seizure may involve more than one drug. Therefore, percentages reflect the proportion of all seizures involving a specific drug, not a discrete number of seizures

11.3 Price and purity of selected illicit drugs - UK

Price and purity of selected drugs are reported by UK Focal Point²⁸, which provides data on drug trends to the European Monitoring Centre for Drugs and Drug Addiction (EMCDDA). 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. Prices for heroin and powder cocaine in the United Kingdom over time are shown in Chart 46; purity of selected drugs in England and Wales is shown in Chart 47. It is not possible to derive figures for Wales alone.



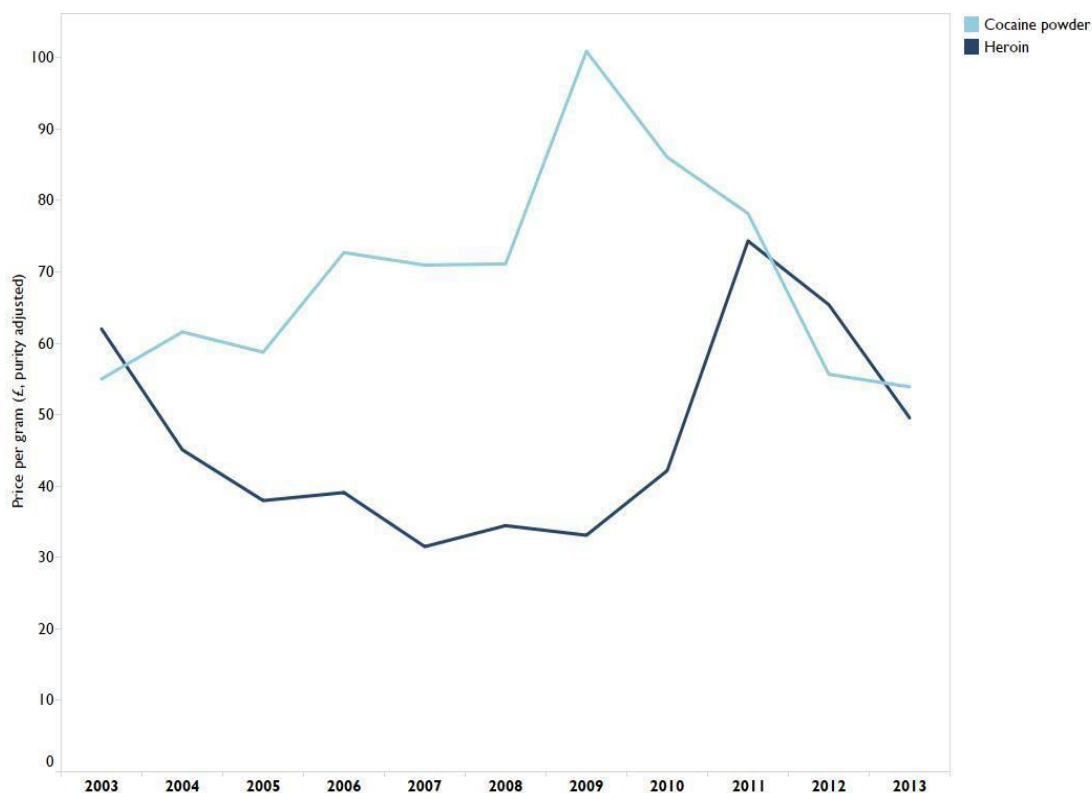
Source: UK Focal Point, 2014

Chart 46: Purity of drugs of drugs seized for resale by the police, UK, 2009-13

The figures provided by the police for purity of drugs in the UK suggest that, following a decline over the years 2011 and 2012, the purity of heroin has returned to levels more

²⁸ UK Focal Point report available at: <http://www.nta.nhs.uk/uploads/uk-focal-point-report-2014.pdf>

usually seen over the past decade, with a rise between 2012 and 2013 from 20 per cent to 33 per cent. The purity of powder and crack cocaine appears also to be returning to its longer term trend following notable falls in reported purity around 2009 and 2010, with purity for 2013 reported as 36 per cent for crack cocaine and 38 per cent for powder cocaine. Low levels of purity for amphetamines are generally consistent with purity levels reported for previous years at under 10 per cent.



Source: UK Focal Point, 2014

Chart 47: Purity adjusted price per gram of cocaine powder and heroin reported by police, England and Wales, 2009-13

Following a steady rise in the reported price of heroin, reaching £74.32 in 2011, two years of price declines have seen reported price fall by a third to £49.55 per gram in 2013. Reported prices of cocaine powder have seen an even more substantial drop from an earlier high in 2009 of £100.89 to just over half that cost in 2013 (£53.89).

Appendix I: Hospital admissions related to alcohol, definitions

When a person is admitted to hospital, the condition which led to their admission 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 Organisation at <http://apps.who.int/classifications/icd10/browse/2010/en>.

Within this report data and discussion concerning to two definitions of hospital admissions related to alcohol are presented and two measures are described within each definition.

'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. Two alcohol specific admissions measures are described in this report. *'Admissions in primary position'* includes all admissions for which an alcohol specific ICD-10 code was recorded as the primary condition which led to admission. *'Admissions in any position'* includes all admission for which an alcohol specific ICD-10 code was recorded in any position, primary or secondary.

However, alcohol also plays a role in a wider range of **'alcohol attributable conditions'**. For example, it is estimated that alcohol plays a causative role in 25-33 per cent of cardiac arrhythmias, with the proportion varying by gender and age²⁹. Some external cause codes also have an alcohol-attributable fraction: for example 27 per cent of assaults are estimated to be alcohol-related²⁹. Alcohol attributable fractions, describing the causative contribution accounted for by alcohol across the population have been calculated for a range of conditions³⁰ and the Public Health Wales Observatory 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. There are two alcohol attributable admissions measures described in this report. The **'narrow measure'** includes all admissions where the primary diagnosis is of an alcohol attributable condition OR the primary diagnosis is of a condition not attributable to alcohol but one or more secondary diagnoses is for an alcohol

²⁹ 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 8 Sept 2014

³⁰ Jones, L and Bellis, M (2013) Updating England-specific alcohol attributable fractions, Centre for Public Health, Liverpool John Moores University

attributable external condition. The 'broad measure' includes all admissions where a diagnosis in any position is alcohol attributable.

The most recent ICD-10 codes for alcohol specific and alcohol attributable conditions were published in 2013³⁰ and are set out in Table 3. 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 3: 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
<i>*Codes added to list of alcohol specific conditions in 2013</i>	
<i>Partially alcohol attributable conditions</i>	
<i>Chronic conditions</i>	
<i>Infectious and parasitic diseases</i>	
Tuberculosis	A15-A19
<i>Malignant neoplasm</i>	
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
<i>*All 'V' codes are considered alcohol attributable and are divided between 'Road/pedestrian traffic</i>	

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 4:

Table 4: Details of conditions denoted by the fourth character of ICD-10 codes beginning with 'F'

.0	<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 "Bad trips" (drugs) Drunkenness NOS Pathological intoxication Trance and possession disorders in psychoactive substance intoxication</p> <p>Excludes: intoxication meaning poisoning</p>
.1	<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>

.2	<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 Dipsomania Drug addiction</p>
.3	<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>
.4	<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>
.5	<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 · psychosis NOS <p>Excludes: alcohol- or other psychoactive substance-induced residual and late-onset psychotic disorder (<u>F10-F19</u> with common fourth character .7)</p>
.6	<p>Amnesic syndrome</p> <p>A syndrome associated with chronic prominent impairment of recent and remote memory. Immediate recall is usually preserved and recent memory is characteristically more disturbed than remote memory. Disturbances of time sense and ordering of events are usually evident, as are difficulties in learning new material. Confabulation may be marked but is not invariably present. Other cognitive functions are usually relatively well preserved and amnesic defects are out of proportion to other disturbances.</p> <p>Amnesic disorder, alcohol- or drug-induced Korsakov's psychosis or syndrome, alcohol- or other psychoactive substance-induced or unspecified</p> <p>Excludes: nonalcoholic Korsakov's psychosis or syndrome (<u>F04</u>)</p>
.7	<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 Chronic alcoholic brain syndrome Dementia and other milder forms of persisting impairment of cognitive functions Flashbacks Late-onset psychoactive substance-induced psychotic disorder Post hallucinogen perception disorder 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)
.8	Other mental and behavioural disorders
.9	Unspecified mental and behavioural disorder

Appendix 2: Alcohol related deaths, definitions

The figures for alcohol related deaths presented in this report are taken from data gathered by the Office for National Statistics (ONS). As described in the ONS Statistical Bulletin on alcohol related deaths for 2012³¹, and the ONS statement on quality and methodology in mortality statistics³² the ONS definition of 'alcohol related deaths' only includes those cases where 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) is regarded as being most directly due to alcohol consumption. The ICD-10 codes (see Appendix 1) for these causes are shown in Table 5 below.

'Alcohol related deaths' by this definition do not, therefore, include other diseases where alcohol has been shown to have some causal relationship, such as cancers of the mouth, oesophagus and liver. The definition includes all deaths from chronic liver disease and cirrhosis (excluding biliary cirrhosis), even when alcohol is not specifically mentioned on the death certificate. Apart from deaths due to poisoning with alcohol (accidental, intentional or undetermined), this definition excludes any other external causes of death, such as road traffic and other accidents.

The definition of alcohol related deaths used in this report is consistent with that used in previous reports.

Table 5: alcohol-related deaths, ICD-10 codes used by the ONS

Condition	Code
Mental and behavioural disorders due to use of alcohol	F10
Degeneration of nervous system due to alcohol	G31.2
Alcoholic polyneuropathy	G62.1
Alcoholic cardiomyopathy	I42.6
Alcoholic gastritis	K29.2
Alcoholic liver disease	K70
Chronic hepatitis, not elsewhere classified	K73

³¹ Office for National Statistics (2014) Alcohol-related deaths in the United Kingdom, registered in 2012. London, The Stationery Office. http://www.ons.gov.uk/ons/dcp171778_353201.pdf

³² Office for National Statistics (2014) Mortality statistics in England and Wales, quality and methodology information. Newport, The Stationery Office.

Fibrosis and cirrhosis of liver	K74 (excluding K74.3-K74.5: Biliary cirrhosis)
Alcohol induced chronic pancreatitis	K86.0
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

Appendix 3: Hospital admissions for poisoning by illicit drugs, definitions

For details of definitions of 'primary' or 'any' diagnosis, and of clinical coding as it relates to hospital admissions see Appendix 1. The ICD-10 codes used to define drug related hospital admissions in this report are shown in Table 6. Note that codes related to external causes (found in Chapter 20 of the ICD-10, e.g. X60-64, Intentional self-poisoning by drugs, medicaments and biological substances) are coded in secondary positions only for hospital admissions and therefore are not included in this report where admissions in the primary position only are described.

The definitions of hospital admissions for poisoning by illicit drugs are consistent with those used in previous reports.

Table 6: ICD-10 codes used to define hospital admissions for poisoning by illicit drugs in the primary position

Condition	Code
Mental and behavioural disorders due to use of opioids	F11
Mental and behavioural disorders due to use of cannabinoids	F12
Mental & behavioural disorders due use sedatives/hypnotics	F13
Mental and behavioural disorders due to use of cocaine	F14
Men & behav dis due use oth stims inc caffeine	F15
Mental and behavioural disorders due to use of hallucinogens	F16
Mental & behavioural disorders due use volatile solvents	F18
Mental & behav'l disorders due multiple/psychoact drug use	F19
Poisoning by narcotics and psychodysleptics	T40
Poisoning by Benzodiazepines	T42.4
Poisoning by psychostimulants with abuse potential	T43.6

Appendix 4: 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 2. 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 record³³. 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 year³⁴. 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 7: ICD-10 codes used by the ONS to define ‘drug related deaths’.

Condition	Code
Mental and behavioural disorders due to drug use (excluding alcohol and tobacco)	F11–F16, F18–F19
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

³³ Office for National Statistics (2014) Deaths Related to Drug Poisoning in England and Wales, 2013. London, The Stationery Office

³⁴ Office for National Statistics (2014) Deaths related to drug poisoning in England and Wales. Quality and methodology information. Newport, The Stationery Office

Table 8: Substances added to the list of ‘illicit drugs’ by the ONS, 2014

1-(benzofuran-5-yl)-N-methylpropan-2-amine
1-(Benzofuran-5-yl)-propan-2-amine
1-(Benzofuran-6-yl)-propan-2-amine
2-(1H-Indol-5-yl)-1-methylethylamine
2-diphenylmethylpyrrolidine
4-Methoxymethcathinone
APB
Khat
Lisdexamphetamine
Tapentadol
Tramadol
Zaleplon
Zopiclone
Fluoromethamphetamine
MDDA
Cannabinoid
Demoxepam
Phenobarbital
Remifentanyl
Zolpidem

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 2013³⁵, the Office for National Statistics published a list of substances mentioned on death certificates in England and Wales. These substances are listed in Table 9.

Table 9: Substance listed by the Office for National Statistics as ‘new psychoactive substances’

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

³⁵ Office for National Statistics (2013) Deaths involving new psychoactive substances, 2012.
<http://www.ons.gov.uk/ons/search/index.html?newquery=new+psychoactive>

Appendix 5: 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:

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:

1. 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.
2. 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.
3. 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.

Appendix 6: Calculating population rates of hospital admission, mortality and other public health indicators

The following description and definition of how population rates are calculated and used in public health has been adapted from the Association of Public Health Observatories Technical Briefing 3, which can be accessed here: www.apho.org.uk/resource/view.aspx?RID=48457

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 genders. This report uses the 2013 ESP, published by Eurostat. Detailed information and guidance on the 2013 ESP has been published by the UK's Office for National Statistics and can be found here: <http://www.ons.gov.uk/ons/guide-method/user-guidance/health-and-life-events/revised-european-standard-population-2013--2013-esp-/index.html>.

Appendix 7: 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’². 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 cannabis².

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). Previous estimates of PDU for Wales 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 estimate³. The figures presented in this report are those derived from applying Bayesian techniques to the data.

² EMCDDA (2010), Statistical bulletin 2010: Problem drug use indicator – overview. Lisbon, EMCDDA <http://www.emcdda.europa.eu/www/advancedsearch.cfm>

³ 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

Table 10: Prevalence of Problem Drug Use (PDU) derived from an analysis of capture recapture data, 2014-15, with confidence intervals, by gender, age and primary problematic substance.

Estimate (95% CI lower, upper)

	18-29, Male	18-29, Female	30-64, Male	30-64, Female
ABMU				
Stimulants	1939 (1384, 2528)	570 (376, 773)	3316 (2384, 4315)	621 (420, 831)
Opioids	730 (617, 850)	338 (272, 405)	2828 (2446, 3229)	748 (607, 883)
Both	97 (88, 106)	73 (67, 79)	355 (331, 379)	100 (90, 111)
Aneurin Bevan				
Stimulants	3135 (2179, 4133)	756 (471, 1070)	3703 (2590, 4871)	751 (471, 1050)
Opioids	690 (519, 861)	306 (221, 396)	2337 (1914, 2786)	763 (582, 948)
Both	119 (100, 139)	47 (37, 56)	383 (339, 428)	98 (80, 116)
BCU				
Stimulants	3045 (2170, 3995)	541 (346, 752)	2871 (2053, 3759)	498 (324, 684)
Opioids	800 (602, 995)	399 (293, 507)	3318 (2752, 3856)	1304 (1015, 1580)
Both	92 (76, 108)	49 (39, 58)	427 (389, 462)	117 (97, 137)
Cardiff and Vale				
Stimulants	1417 (916, 1973)	262 (145, 393)	1805 (1179, 2512)	313 (170, 461)
Opioids	666 (487, 888)	219 (158, 305)	2308 (1848, 2950)	590 (452, 809)
Both	120 (101, 145)	48 (40, 57)	350 (310, 404)	102 (87, 120)

	18-29, Male	18-29, Female	30-64, Male	30-64, Female
Cwm Taf				
Stimulants	1408 (977, 1860)	300 (195, 412)	2210 (1632, 2834)	415 (285, 556)
Opioids	245 (171, 315)	105 (73, 136)	970 (783, 1164)	365 (287, 443)
Both	59 (53, 66)	28 (26, 31)	206 (194, 218)	59 (54, 64)
Hywel Dda				
Stimulants	721 (446, 1033)	252 (130, 391)	1006 (636, 1419)	281 (142, 436)
Opioids	364 (250, 488)	159 (104, 220)	1198 (889, 1525)	380 (259, 515)
Both	33 (27, 41)	16 (13, 20)	123 (105, 141)	29 (23, 37)
Powys Teaching				
Stimulants	120 (53, 227)	18 (4, 41)	118 (49, 219)	24 (9, 50)
Opioids	93 (47, 144)	42 (19, 67)	224 (138, 320)	110 (66, 159)
Both	11 (7, 19)	4 (3, 7)	17 (12, 26)	3 (2, 6)
WALES TOTAL:				
58,186	15,906	4,534	30,072	7,674
OPIOIDS (18-64)	22600 (20813, 24478)			
STIMULANTS (18-64)	32418 (28419, 36606)			
BOTH (18-64)	3167 (3026, 3312)			

For further information regarding the prevalence estimate of problematic drug use in Wales, please contact the authors.

