

# ***Piecing the puzzle:***

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



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’.**

## **Substance Misuse Programme**

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## 1. 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 NHS Wales sources, the Harm Reduction Database (HRD) Wales, the Welsh National Database for Substance Misuse (WNDSM), 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 data 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, as well as trends over time.

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

Within section I, the report presents population based data relating to self-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. 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 fell between 2011 and 2015, from 43.4 per cent to 39.9 per cent of the Welsh population aged 16+
- The number of individuals admitted to hospital for an alcohol specific condition fell by 1.6 per cent on the previous year.
- Hospital admissions related to use of illicit drugs rose by 9 per cent compared with 2014-15. Admissions data suggests that use of multiple drugs may be increasing
- The number of assessments carried out by specialist substance misuse services in Wales in 2015-16 fell by 17.3 per cent. A fall of 2,407 in the number of assessments in which alcohol was reported as the primary substance of use accounted for 61.9 per cent of this decrease
- Deaths from drug misuse rose 48.7 per cent to 168 in 2015. This increase reverses the trend seen over the previous five years and appears to be driven by substantial increases in heroin/morphine related deaths which rose to 85 deaths in 2015, an increase of 93.2 per cent

### **Children and young people (under 25)**

- There were 975 cases of children in need in which the child's substance misuse was identified as an issue and 4,965 children in need due to parental substance misuse in 2015, falls on the previous year 9.3 per cent and 3 per cent respectively
- Hospital admissions for alcohol specific conditions involving young people fell by 32.4 per cent over the last five years to 1,043 in 2015-16
- Hospital admission related to opioids have fallen by 23.1 per cent between 2011-12 and 2015-16 amongst young people; over the same period cannabinoid related admissions have more than doubled

### **Working aged adults (25-49 years)**

- The number of hospital admissions for alcohol specific conditions involving working age adults has fallen by 16.2 per cent since 2011-12
- Opioids continued to account for considerably more admissions than any other substance, with 1,877 admissions in 2015-16, an increase of 7.8 per cent from 2014-15
- The number of substance misuse assessments at which alcohol was reported as the main substance of use fell 20.1 per cent from 2014-15 to 2015-16

**Older people (Aged 50 years and above)**

- The number of individuals admitted to hospital with an alcohol related condition in 2015-16 remained stable in relation to the previous year in this age group following three years of increases from 2011-12 to 2013-14
- Hospital admissions involving illicit drugs rose 4.8 per cent in 2015-16 compared with the previous year
- Alcohol remains the substance for which individuals in this age group are most likely to seek treatment, with 2,940 assessments in 2015-16, ten times the number for opioids



### 3. Headline population trends

Data from the most recent five years suggest that opioid harms have fallen amongst younger people since 2011-12, whilst for older people they have risen; alcohol harms are changing in different ways and at different rates between age groups whilst cannabinoid admissions are rising sharply across all age groups.

Problem drug use (PDU) is defined by the European Monitoring Centre for Drugs and Drug Addiction (EMCDDA) as “injecting drug use or long duration or regular use of opioids, cocaine and/or amphetamines [including amphetamine type substances]”<sup>1</sup>. Provisional headline figures for problem drug use in Wales, including populations not in contact with any services, suggest that the total number of problem drug users in 2015-16 was 49,370, an increase of 11.1 per cent on 2014-15 when the headline number was 44,440. However, variation in the datasets on which these figures are based has been identified and therefore these figures are subject to revision and will be not specified by age group within this report. Details of the methods used to produce PDU figures for Wales is given in Appendix 7.

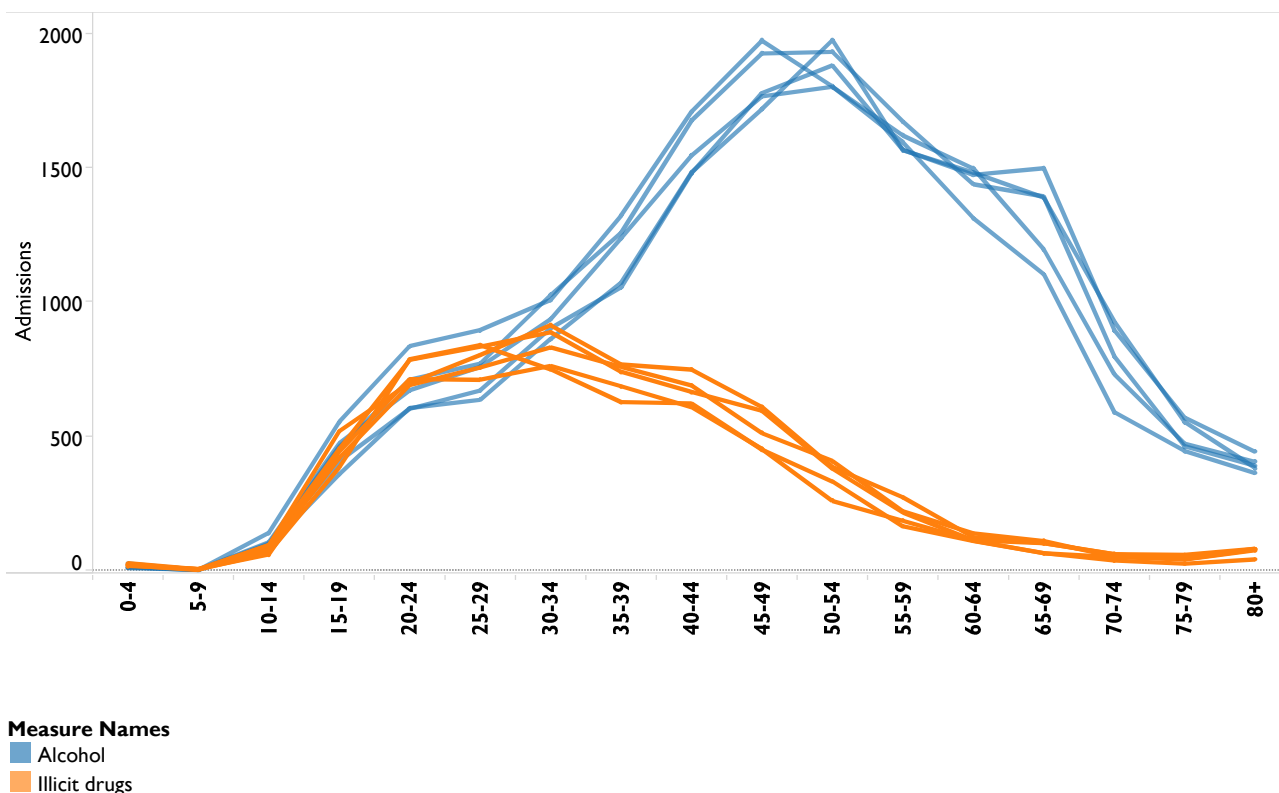
#### 3.1 Alcohol specific and illicit drug poisoning hospital admissions

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 Appendices 1 and 3 this document.

Hospital admissions for alcohol specific conditions and illicit drugs are shown by year in Chart 1. In 2015-16, there were 6,141 hospital admissions related to illicit drugs; there were almost two and a half times as many alcohol specific admissions over the same period (14,868). As can be seen from the Chart, admissions in different age groups are relatively stable over time, with comparable numbers of admissions for both groups of conditions to the age of 30, after which admission for illicit drugs fall steadily whilst those for alcohol related conditions continue to rise, peaking in the late 40s and early 50s age bands. It is important to note that one individual may be admitted for both alcohol and illicit drug related conditions and that an individual admission may be the result of both alcohol and illicit drug use.

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<sup>1</sup> EMCDDA (2004) Recommended Draft Technical Tools and Guidelines - Key Epidemiological Indicator: Prevalence of problem drug use. Lisbon: EMCDDA, 2004. Available at: <http://www.emcdda.europa.eu/stats07/PDU/methods>



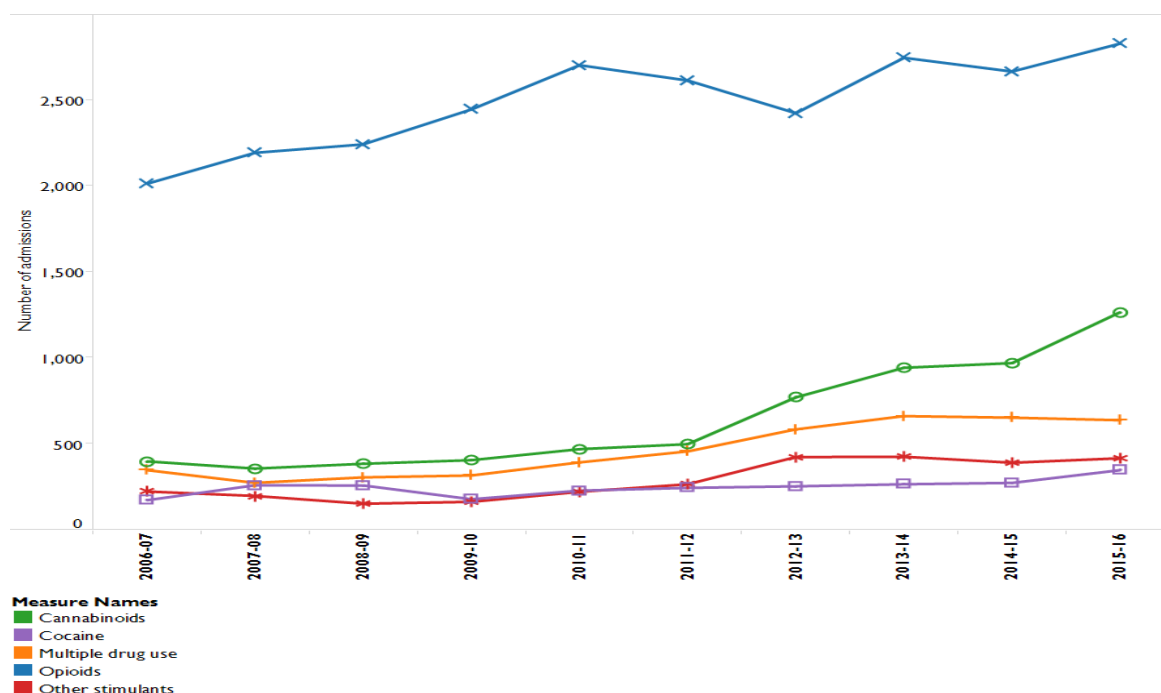
Source: Substance Misuse Programme / NHS Wales Informatics Service, 2016

**Chart 1: Hospital admissions for alcohol specific conditions and illicit drugs, 2011-12 to 2015-16**

### 3.2 Hospital admissions for poisonings with illicit drugs

The overall number of hospital admissions for poisonings with named illicit drugs has increased by 8.1% per cent from 5,682 in 2014-2015 to 6,141 in 2015-16 and by 20.9 per cent in the five year period since 2011-12. However, the trends in number of admissions and individuals varies by age group and gender which will be described in the relevant sections of this report. In terms of specific named illicit drugs, admissions are highest for opioid poisonings, as shown in Chart 2, with a gradual but not stable trend in increased admissions. More recently, increases in admissions have been recorded for cannabinoids. It is important to note that no distinction is possible in hospital admissions for different cannabinoid products: cannabis resin, stronger strains of herbal cannabis 'skunk,' or newer forms of synthetic cannabinoid receptor agonists (SCRAs), sometimes referred to as 'legal highs', 'Spice' etc. WEDINOS, a project testing and profiling substances submitted from across Wales provides evidence of a substantial market for SCRAs in Wales<sup>2</sup>. In addition, stronger strains of cannabis may also be more widely available. Further research is required to better evidence increases in hospital admissions relating to cannabinoids in all relevant age groups.

<sup>2</sup> WEDINOS (2015) Philtre annual report, 2014-15. Public Health Wales. Available at: <http://www.wedinos.org/newsletter.html>



Source: Substance Misuse Programme / NHS Wales Informatics Service, 2016

**Chart 2: Hospital admissions for poisonings with named illicit drugs, 2006-7 to 2015-16**

### 3.3 Self-reported alcohol consumption in relation to recommended guidelines

The Welsh Health Survey and additional analysis by the Public Health Wales Observatory<sup>3</sup> provide details of self reported consumption of alcohol by a representative sample of the Welsh population aged 16 and over. When the 2015 survey was carried out, guidelines recommended that men drink no more than 4 units per day and women no more than 3 units. These are the guidelines by which figures in this report are defined; however, note that since the survey was carried out, these guidelines have changed<sup>4</sup>.

The Welsh Health Survey for 2015 asked questions regarding ‘drinking above guidelines’ (i.e. drinking more than the recommended units on any day of the preceding week) and ‘binge drinking’ (defined as drinking more than twice the daily recommended limit on any

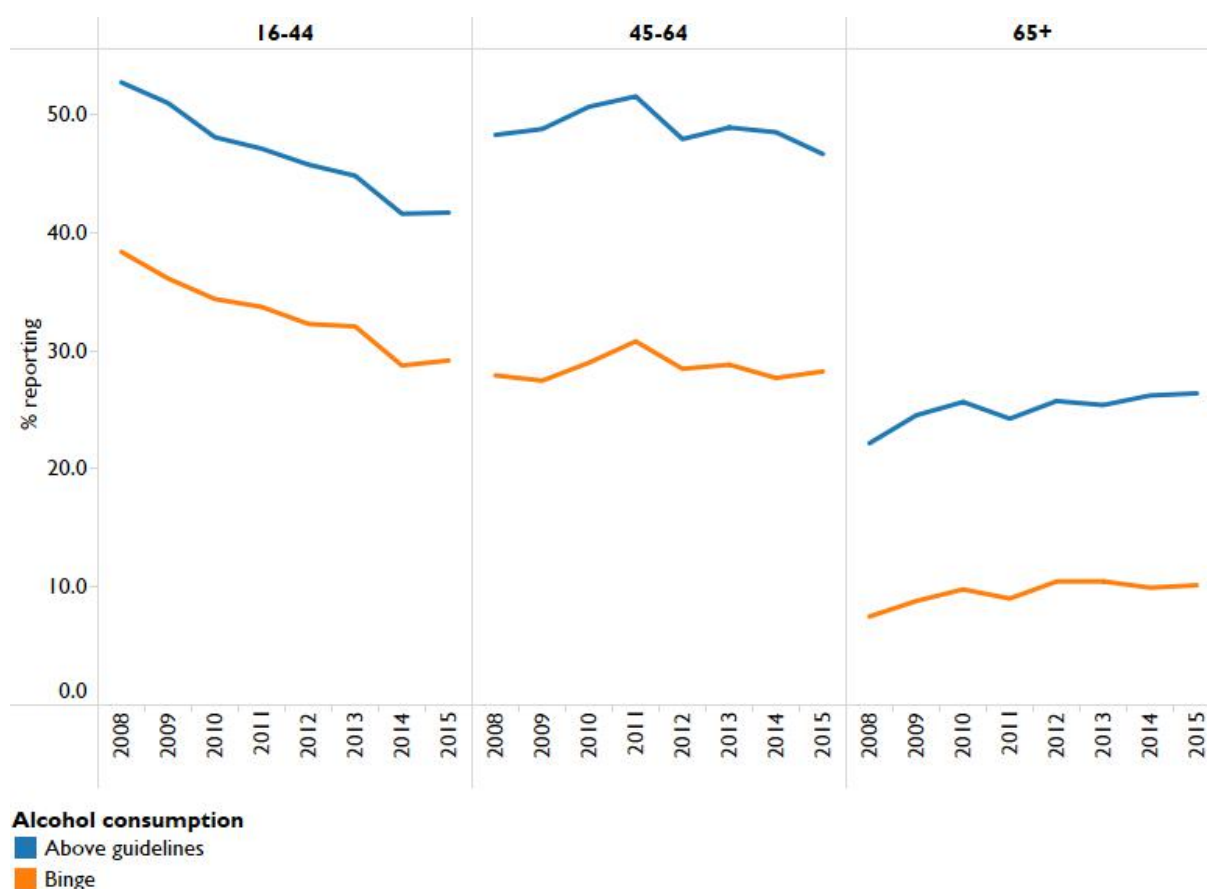
<sup>3</sup> See <http://gov.wales/statistics-and-research/welsh-health-survey/?lang=en> for further details of the Welsh Health Survey, methodology and headline results; see <http://public.tableau.com/profile/publichealthwalesobservatory#!/vizhome/PHOFInterimReportingTool/Home> for additional analysis by the Public Health Wales Observatory

<sup>4</sup> See [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/489795/summary.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/489795/summary.pdf) for details of new guidelines on alcohol consumption

day of the preceding week). These questions were first asked in this form in the 2008 survey.

Across the whole Welsh population aged 16+, the European Age Standardised Rate for drinking above guidelines has fallen from 43.4 per cent in 2011 to 39.9 per cent in 2015. The rate for binge drinking also fell from 27.1 per cent to 24.5 per cent. In broad terms, both consumption above guidelines and binge drinking have fallen amongst those aged 16-44, remained the same amongst those aged 45-64 and risen slightly amongst those aged 65 and over since 2008. The changes are most marked amongst those in the lowest age group, with drinking above guidelines falling from a reported 52.7 per cent in 2008 to 41.7 per cent in 2015. The comparable figure for binge drinking in this age group was 38.4 in 2008 and 29.2 in 2015. However, following reductions in six consecutive years to 2014, the percentages of those aged 16-44 reporting both drinking above guidelines and binge drinking rose very slightly in 2015, by 0.1 and 0.4 percentage points respectively.

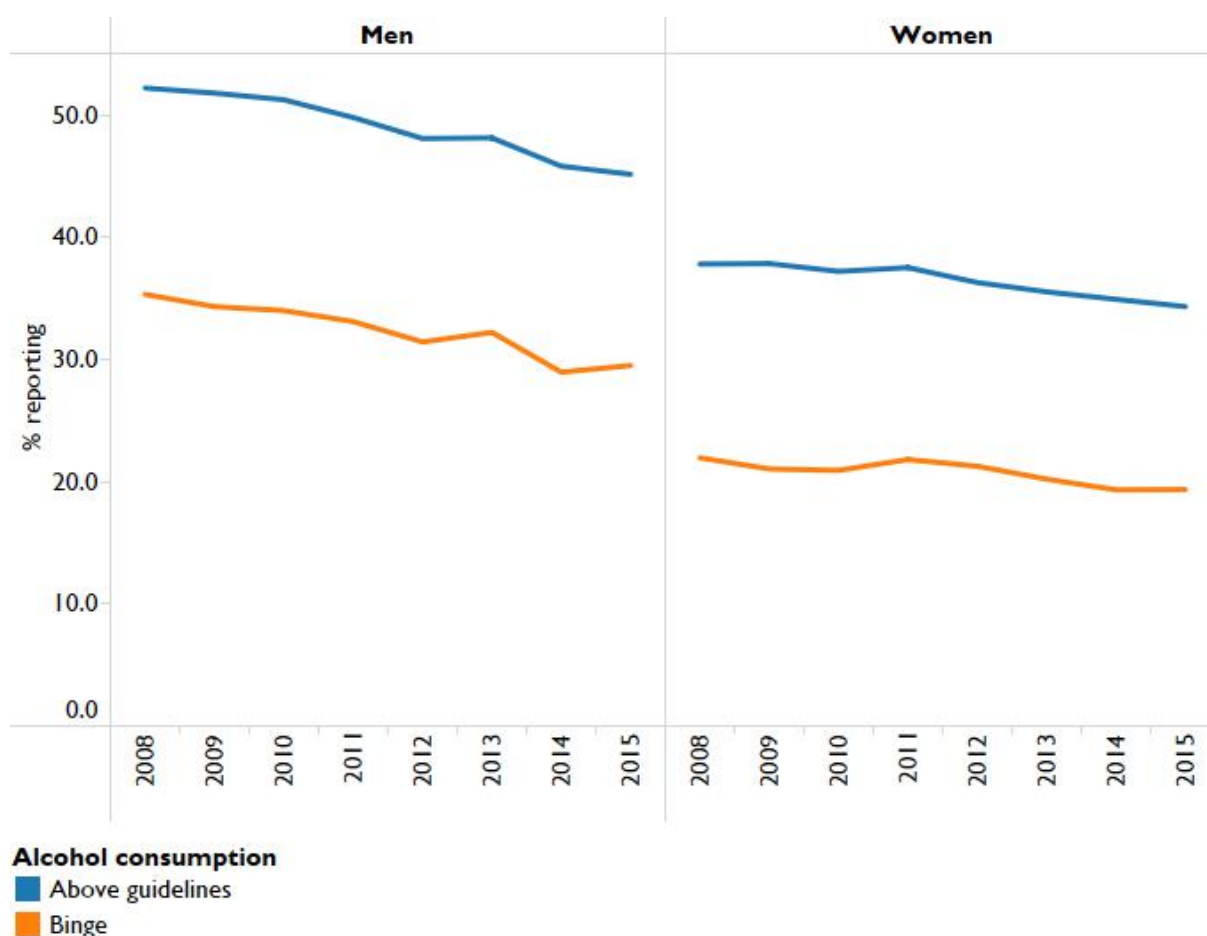
Amongst those aged 45-64, there has been no clear trend between 2008 and 2015. The percentage in this age group reporting drinking above guidelines fell by 1.8 percentage points between 2014 and 2015, whilst reported binge drinking rose 27.7 per cent to 28.2 per cent. For those aged 65 and over, the figures suggest a gradual rise over the period 2008 to 2015, with those reporting drinking above guidelines increasing from 22.2 per cent to 26.4 per cent and reported binge drinking increasing from 7.5 to 10.1 per cent. However, drinking in ways that do not reflect official guidelines remains lower in this age group than in either of the other groups, as can be seen in Chart 3.



Source: Welsh Health Survey, Welsh Government, 2015

**Chart 3: Self reported alcohol consumption in relation to official guidelines by age group, Wales, 2008-2015**

Figures from the Welsh Health Survey suggest that the proportion of adults drinking above guidelines and binge drinking is decreasing amongst both men and women, although the decrease is more marked in men. Between 2008 and 2015, the proportion of men aged 16+ reporting drinking above guidelines fell from 52.2 per cent to 45.2 per cent. For binge drinking, the fall was from 35.3 per cent to 29.5 per cent. Amongst women, reported drinking above guidelines fell by 3.5 percentage points between 2008 and 2015 to 34.3 per cent and by 0.6 percentage points to 19.4 per cent for binge drinking. Chart 4 shows changes in drinking above guidelines and binge drinking by gender as reported to the Welsh Health Survey.

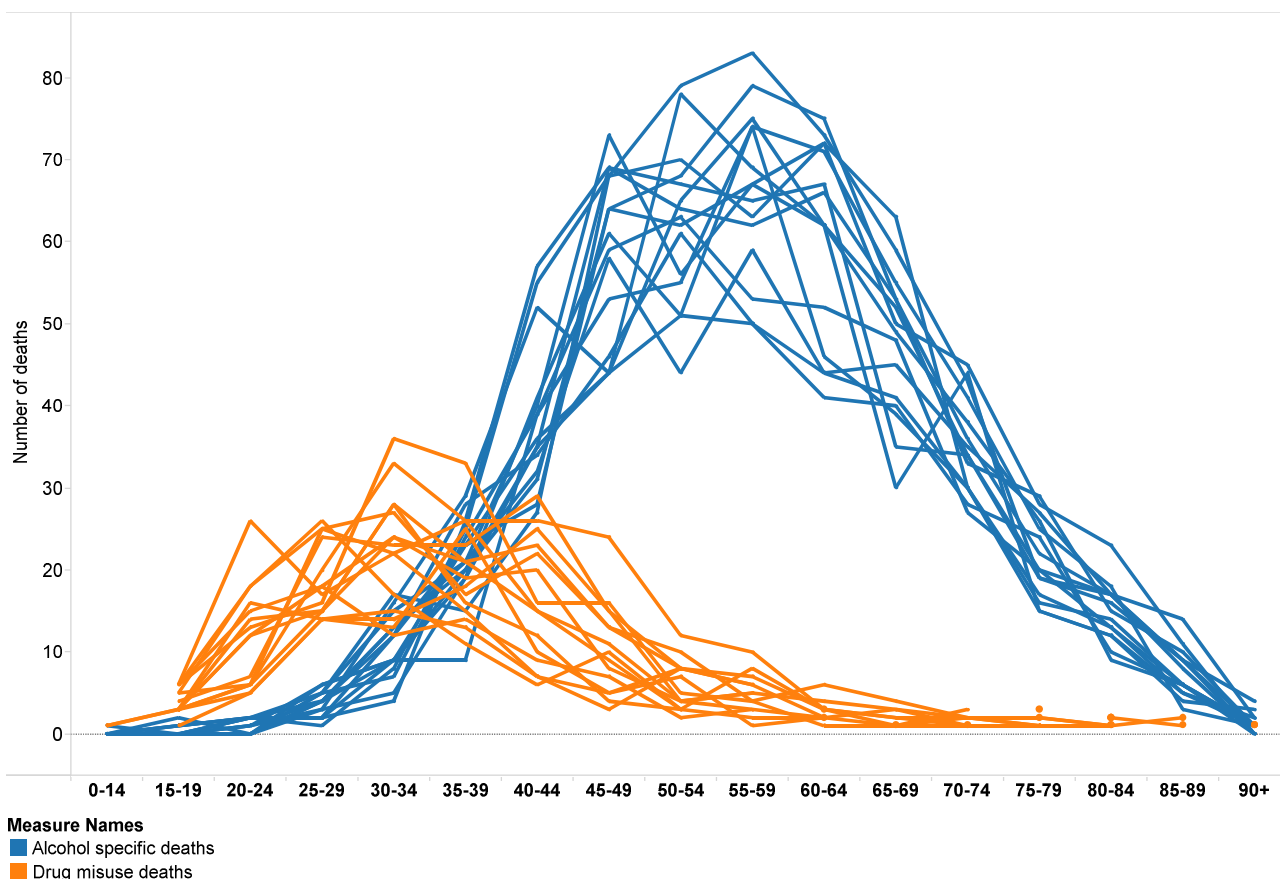


Source: Welsh Health Survey, Welsh Government, 2015

**Chart 4: Self reported alcohol consumption in relation to official guidelines by gender, Wales, 2008-15**

### 3.4 Alcohol related deaths and deaths from drug misuse

As with the data presented for drug and alcohol hospital admissions above, both alcohol and drug related deaths steadily increase towards the ages of 20-24 years, as shown in Chart 5. However, whilst the number of drug deaths remains relatively stable in any given year up to 40-44 years and then steadily declines, alcohol related deaths continue to rise dramatically to a later peak (50-54 years old in 2015-16) with sustained higher rates of death over a wider age range than is seen with deaths from drug misuse.



Source: Office for National Statistics, 2016

**Chart 5: Deaths from drug misuse and alcohol specific conditions, Wales, 2001-15, by age band**

### 3.5 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.

Table 1 shows detailed figures for key alcohol indicators across Wales for the most recent five years. There were 10,044 individuals admitted with an alcohol specific condition in any diagnostic position in 2015-16, accounted for 14,583 admissions of which an alcohol specific condition was recorded in the primary position in 3,330 cases. The number of individuals admitted for alcohol specific conditions has continued to fall in 2015-16 for both men and women. There were 1.6 per cent fewer individuals admitted in 2015-16 compared to the previous year; since 2011-12, the fall has been 3 per cent, and has been more marked amongst women (4.9 per cent fewer individuals admitted) than men (2 per cent fewer). For alcohol specific admissions, the falls are comparable, at 1.5 per cent for all persons over one year and 3.9 per cent over four years.

Figures for alcohol-attributable admissions, by contrast showed almost no change by indicator (person or admission based) or gender over one year and a rise since 2011-12 of 4 per cent for person based measures and 5.3 per cent for episode based measures.

**Table 1: Hospital admissions related to alcohol, individuals resident in Wales, by indicator, year and gender**

	<b>Gender</b>	<b>2011-12</b>	<b>2012-13</b>	<b>2013-14</b>	<b>2014-15</b>	<b>2015-16</b>
<b>Number of individuals admitted to hospital with an alcohol specific condition in any diagnostic position</b>	All persons	10,355	10,223	10,616	10,208	10,044
	Male	6,717	6,720	6,954	6,628	6,584
	Female	3,638	3,503	3,662	3,580	3,460
<b>Number admissions to hospital with an alcohol specific condition in any diagnostic position</b>	All persons	15,173	14,680	15,500	14,799	14,583
	Male	10,071	9,832	10,306	9,771	9,608
	Female	5,102	4,848	5,194	5,028	4,975
<b>Alcohol attributable admissions, broad measure, person based</b>	All persons	33,779	34,087	35,077	34,932	35,122
	Male	21,517	21,750	22,457	22,255	22,480
	Female	12,262	12,337	12,620	12,677	12,642
<b>Alcohol attributable admissions, broad measure, episode based</b>	All persons	51,230	51,309	53,756	53,938	53,957
	Male	33,234	33,278	34,999	34,984	34,982
	Female	17,997	18,030	18,757	18,954	18,975



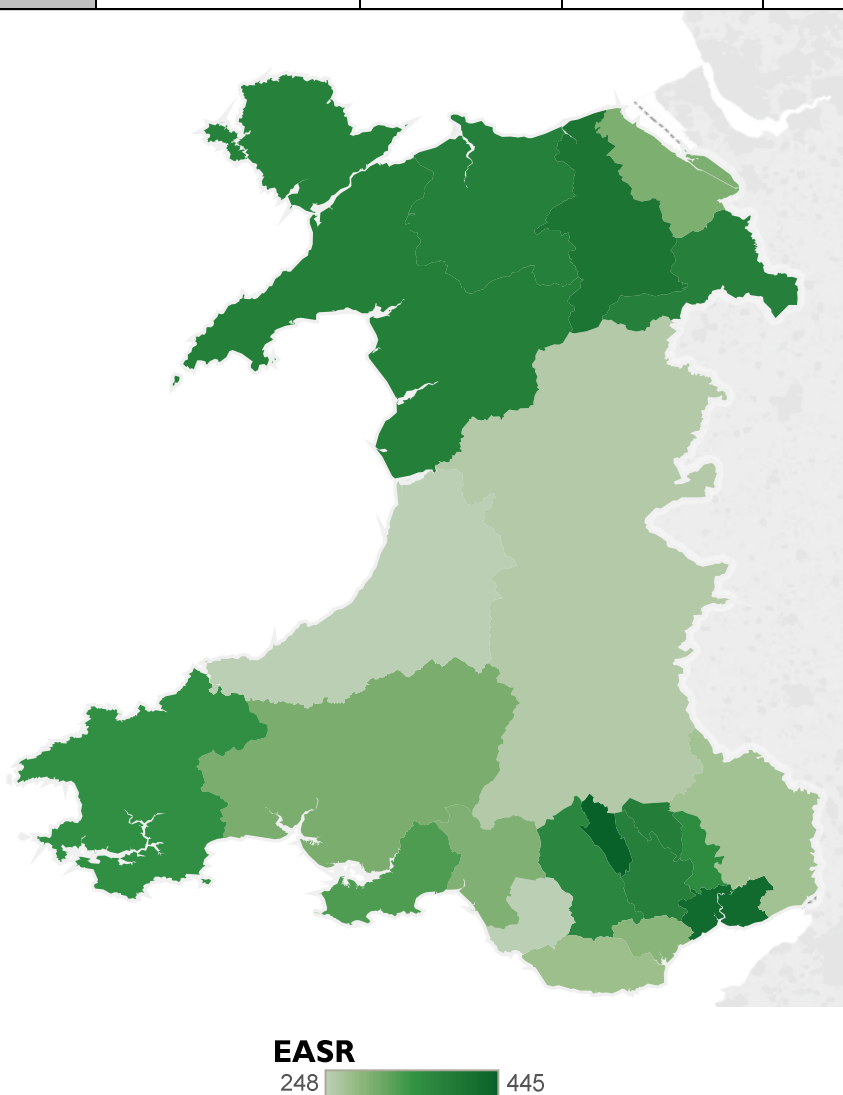
### 3.5.1 Alcohol related hospital admissions by local authority (residents) in Wales

There was considerable geographical variation in alcohol related hospital admissions across Wales. Merthyr Tydfil was the Local Authority area that recorded the highest European Age Standardised Rate (see Appendix 6) of individuals admitted to hospital with an alcohol specific condition in any position with 445 individuals per 100,000 population. This rate is around 1.8 times the comparable rate in Bridgend and Ceredigion which recorded the lowest rate of Welsh Local Authority areas at 248. Across Wales, the rate was 331 individuals admitted per 100,000. This figure represents a fall of 1.5 per cent on the previous year and 3.8 per cent since 2011-12. At a Local Authority level, changes in annual rates of individuals admitted have also shown considerable differences over these periods, with the rate for Neath Port Talbot showing the largest one year fall at 14.5 per cent over one year and Powys, with a rise of 9.4 per cent, reporting the largest rate increase. Table 2 shows the European Age Standardised Rate of individuals admitted for alcohol specific conditions in any position by Local Authority area, with one year and four year changes. Figure 1 maps the 2015-16 EASR by Local Authority area.

**Table 2: Individuals resident in Wales admitted to hospital for an alcohol specific condition in any position, 2015-16, by Local Authority area, European Age Standardised Rate**

Health Board area	Local Authority area	EASR, 2015-16	Change since 2014-15	Change since 2011-12
<b>ABMU</b>	Bridgend	248	-8.1%	-18.2%
	Neath Port Talbot	296	-14.5%	-14.2%
	Swansea	331	-5.2%	-5.2%
<b>Aneurin Bevan</b>	Blaenau Gwent	388	1.3%	-20.0%
	Caerphilly	384	2.9%	-3.3%
	Monmouthshire	269	8.9%	1.5%
	Newport	428	-4.9%	-0.7%
	Torfaen	362	-5.0%	-11.3%
<b>BCU</b>	Conwy	386	-2.0%	2.9%
	Denbighshire	408	3.3%	11.8%
	Flintshire	299	-10.5%	-15.1%
	Gwynedd	387	1.8%	-4.2%
	Isle of Anglesey	381	0.0%	4.1%
	Wrexham	384	2.9%	9.4%
<b>Cardiff and Vale</b>	Cardiff	288	1.4%	3.6%
	Vale of Glamorgan	274	-10.7%	-7.7%
<b>Cwm Taf</b>	Merthyr Tydfil	445	3.5%	-0.7%
	Rhondda Cynon Taf	367	-0.8%	-4.4%

<b>Hywel Dda</b>	Carmarthenshire	301	6.7%	5.2%
	Ceredigion	248	-7.5%	3.3%
	Pembrokeshire	354	-1.7%	-15.7%
<b>Powys Teaching</b>	Powys	255	9.4%	7.6%
<b>Wales</b>	<b>Wales</b>	<b>331</b>	<b>-1.5%</b>	<b>-3.8%</b>



**Source:** Substance Misuse Programme / NHS Wales Informatics Service, 2016

**Figure 1: Individuals resident in Wales admitted to hospital for an alcohol specific condition in any position, 2015-16, by Local Authority area, European Age Standardised Rate**

Blaenau Gwent was the Local Authority Area with the highest European Age Standardised Rate of alcohol-attributable admissions (broad measure, episode based) at 2,148. This was

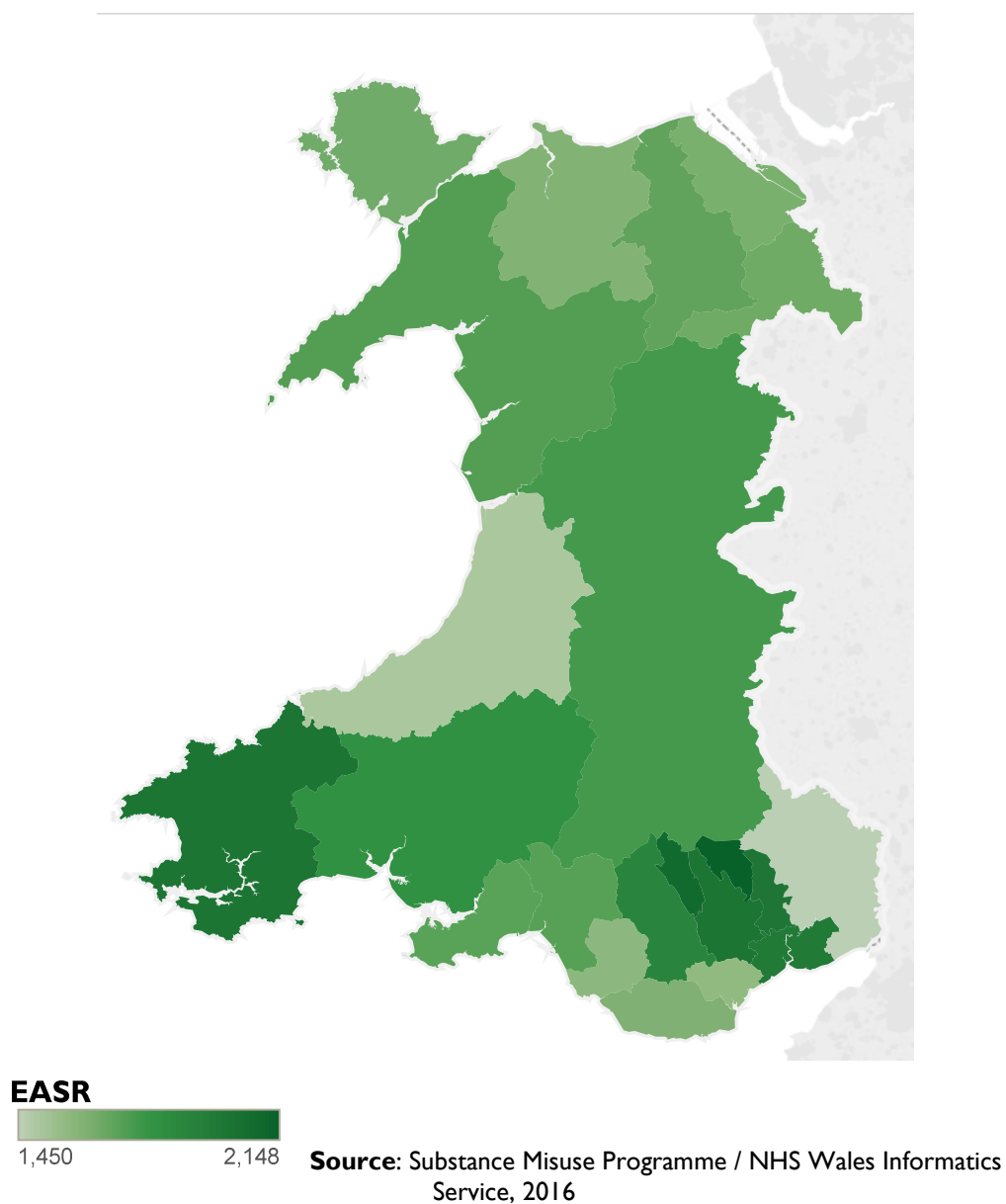
about 1.5 times the lowest rate recorded in Monmouthshire, 1,450 alcohol-attributable admissions per 100,000 population. The fact that these areas border one another illustrates the lack of any clear geographical pattern in the data at this level. Flintshire saw the largest fall in alcohol-attributable admissions over one year, with a reduction of 9.7 per cent. The Local Authority area with the largest rise was Cardiff, with an increase of 7.8 per cent. Across Wales, a very slight fall of 0.6 per cent was seen in this rate, although over four years a rise of 2.2 per cent was seen. Table 3 and Figure 2 present rates per 100,000 for alcohol-attributable admissions (episode-based, broad measure) in 2015-16.

**Table 3: Alcohol-attributable hospital admissions, individuals resident in Wales, episode base, broad measure, 2015-16, by Local Authority area, European Age Standardised Rate**

Health Board area	Local Authority area	EASR, 2015-16	Change since 2014-15	Change since 2011-12
<b>ABMU</b>	Bridgend	1,583	-4.8%	-0.1%
	Neath Port Talbot	1,720	-7.3%	-0.9%
	Swansea	1,713	-3.7%	-3.6%
<b>Aneurin Bevan</b>	Blaenau Gwent	2,148	2.2%	-14.3%
	Caerphilly	2,017	-0.7%	-1.5%
	Monmouthshire	1,450	2.5%	-4.6%
	Newport	1,972	0.9%	-2.0%
	Torfaen	2,003	3.4%	-5.0%
<b>BCU</b>	Conwy	1,613	-5.5%	-2.5%
	Denbighshire	1,700	-7.0%	5.1%
	Flintshire	1,636	-9.7%	-2.3%
	Gwynedd	1,728	2.4%	-2.3%
	Isle of Anglesey	1,660	-3.3%	-0.5%
	Wrexham	1,663	-3.4%	1.5%
<b>Cardiff and Vale</b>	Cardiff	1,574	7.8%	9.7%
	Vale of Glamorgan	1,620	2.3%	-1.9%
<b>Cwm Taf</b>	Merthyr Tydfil	2,087	5.6%	0.5%
	Rhondda Cynon Taf	1,891	1.0%	2.8%
<b>Hywel Dda</b>	Carmarthenshire	1,817	1.7%	18.6%
	Ceredigion	1,502	-3.5%	17.3%
	Pembrokeshire	2,014	1.3%	13.4%
<b>Powys Teaching</b>	Powys	1,760	3.7%	15.7%

<b>Wales</b>	<b>Wales</b>	1,749	-0.6%	2.2%
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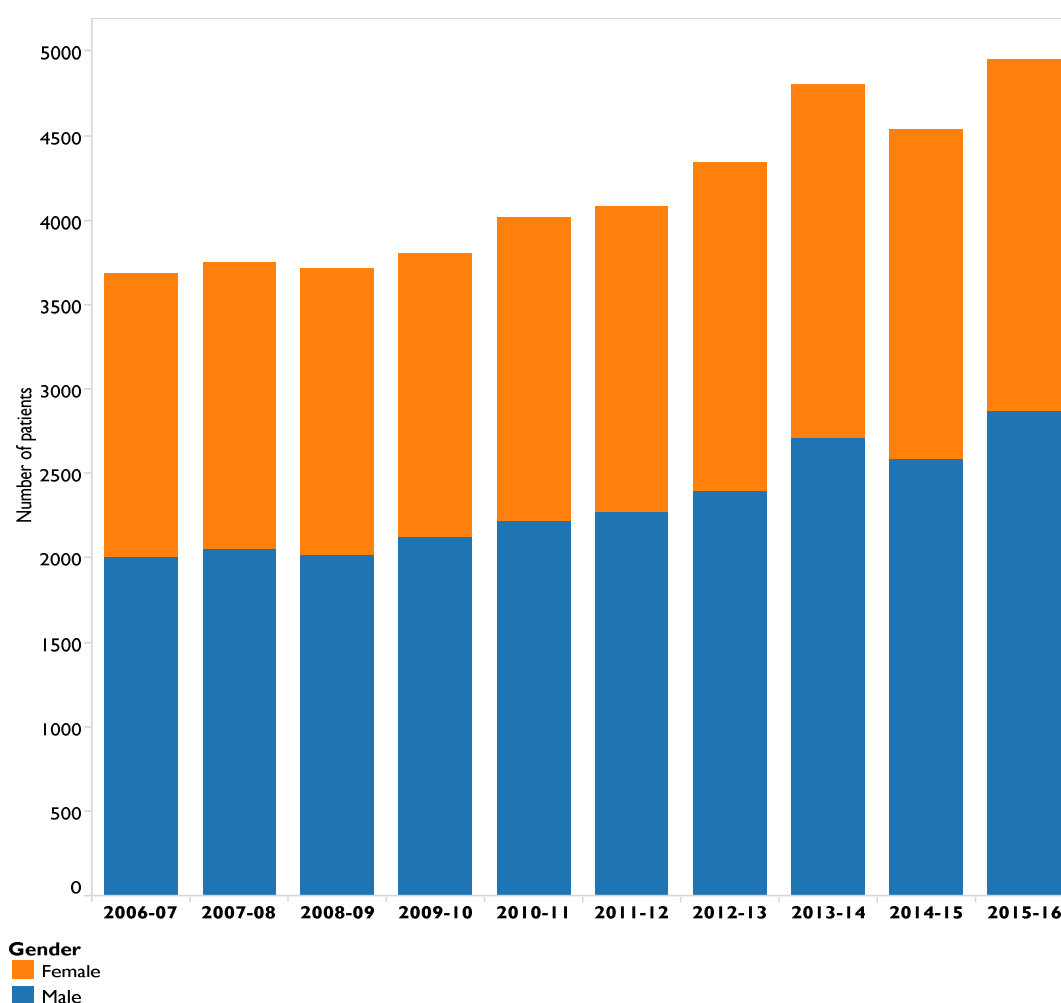
**Source:** Substance Misuse Programme / NHS Wales Informatics Service, 2016



**Figure 2: Alcohol-attributable hospital admissions, individuals resident in Wales, episode base, broad measure, 2015-16, by Local Authority area, European Age Standardised Rate**

### 3.6 Hospital admissions involving use of illicit drugs

There were 6,141 admissions related to illicit drugs<sup>5</sup> in 2015-16, involving 4,947 distinct individuals, representing a rise of 8.1 per cent and 9 per cent respectively from 2014-15. A condition related to illicit drug use was in the primary position in 1,823 recorded admissions. These rises may reflect a return to a trend of admissions rising year on year following a fall in 2014-15. Over ten years, the number of individuals admitted has risen by 34.4 per cent, almost identical to the rise in overall admissions over the same period (34.7 per cent). The number of individuals admitted over this period is shown by gender in Chart 6.



Source: Substance Misuse Programme / NHS Wales Informatics Service, 2016

**Chart 6: Individuals resident in Wales admitted to hospital with a condition related to illicit drugs, by year and gender**

<sup>5</sup> Note that the methodology for calculating hospital admissions related to illicit drugs has changed this year to bring it more in line with figures for alcohol related admissions and figures from other regions of the UK. Therefore figures presented here may not be comparable with those in previous reports. See Appendix 3 for further details on this measure.

One notable aspect of hospital admissions in relation to illicit drugs is that there is a much more even split between genders than for alcohol related admissions. Where 65.6 per cent of individuals admitted to hospital for alcohol specific conditions in any position in 2015-16 in Wales were men, the comparable proportion for illicit drugs was 58 per cent. This is consistent with data on mortality from substance misuse, which also show a more even split between men and women for deaths from drug misuse when compared with alcohol related deaths.

As shown in Chart 7, whilst the European Age Standardised rate for hospital admissions related to illicit drugs has generally risen year on year over the past ten years to 205.7 per 100,000 population, observed trends differed between different types of drugs. Admissions for opioid related conditions, at 95 per 100,000 in 2015-16, accounted for almost half of all admissions in 2015-16; this proportion has stayed relatively stable over the past ten years. By contrast, admissions related to cannabinoids<sup>6</sup> have risen markedly, in particular over the past five years. In 2015-16, the rate of Cannabinoid-related admissions was 40.9 per 100,000, more than two and a half times the rate of 15.8 in 2011-12. Cannabinoid related admissions accounted for just under one in five illicit drug related admissions in 2015-16, compared with under one in ten four years ago. It should be noted that evidence from sources in Wales such as WEDINOS, a project testing drugs submitted by individuals and organisations, suggests that a substantial market for synthetic cannabinoids is now operating in Wales<sup>7</sup>. In addition, stronger strains of cannabis may also be more widely available. Hospital admissions data does not reflect these changes within the broad category of cannabinoids. Although cocaine related admissions accounted for a relatively small proportion of all illicit drug related admissions in 2015-16, the rate of 11.3 per 100,000 represented an increase of 44.9 per cent compared with 2011-12.

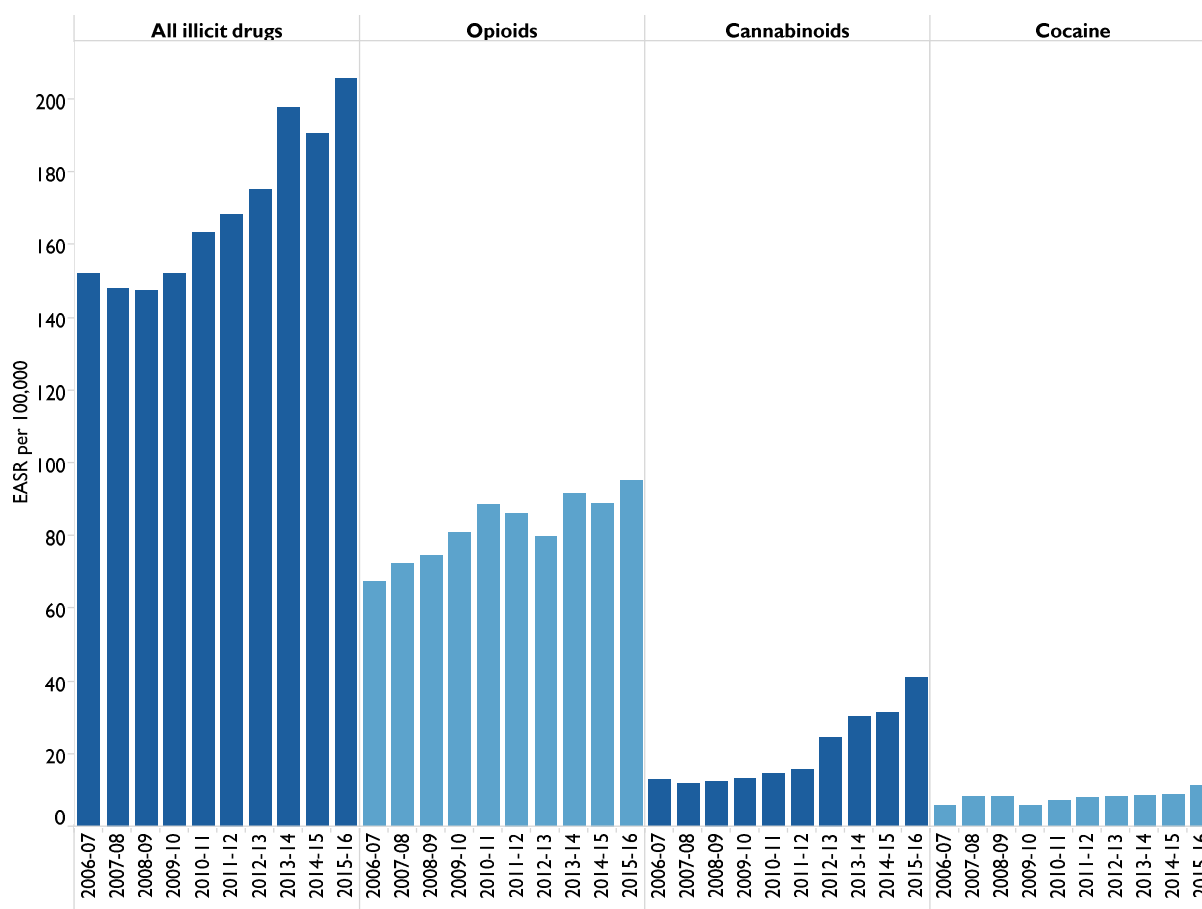
It should be noted that admissions can involve more than one drug type and polydrug use is both regularly reported by those using illicit drugs and may significantly increase the risks of drug use<sup>8</sup>. In 2015-16, 626 admissions were coded as involving 'multiple drug use', 10.2 per cent of all admission related to illicit drugs. However, a more detailed analysis of the data suggests that 'multiple drug use' may not be coded in admission records even when more than one illicit substance is identified. For example, in 2015-16, 109 admissions were recorded as involving both opioids and cannabinoids, but no code for multiple drug use was included. This is an issue that may benefit from further analysis.

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<sup>6</sup> Note that it is not possible in hospital admission data to distinguish between herbal or resin cannabis and synthetic cannabinoids

<sup>7</sup> WEDINOS (2015) Philtre annual report, 2014-15. Public Health Wales. Available at: <http://www.wedinos.org/newsletter.html>

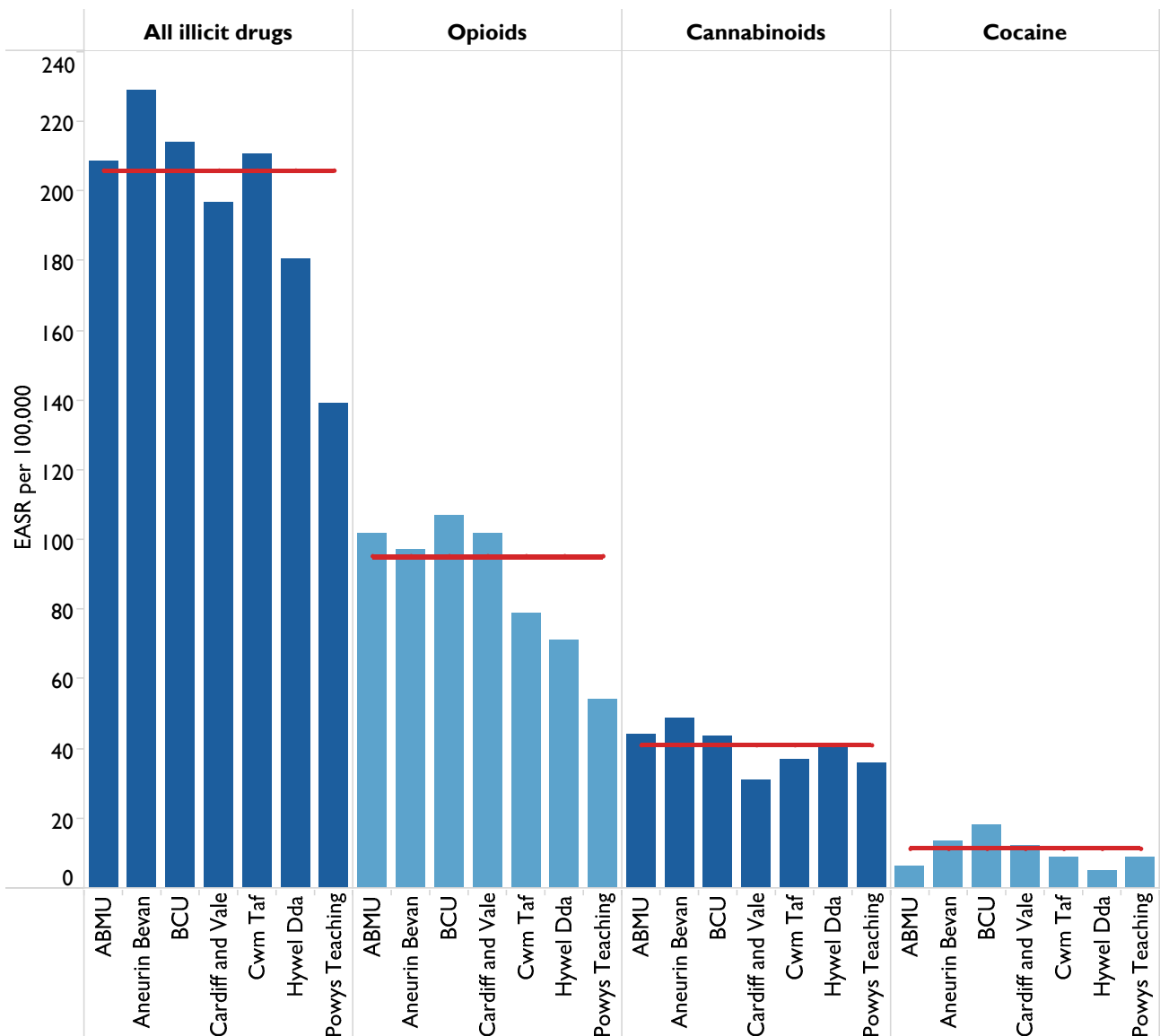
<sup>8</sup> Department of Health (England) and the devolved administrations (2007). Drug Misuse and Dependence: UK Guidelines on Clinical Management. London: Department of Health (England), the Scottish Government, Welsh Assembly Government and Northern Ireland Executive. [http://www.nta.nhs.uk/uploads/clinical\\_guidelines\\_2007.pdf](http://www.nta.nhs.uk/uploads/clinical_guidelines_2007.pdf)



Source: Substance Misuse Programme / NHS Wales Informatics Service, 2016

**Chart 7: Hospital admissions related to illicit drugs, individuals resident in Wales, European Age Standardised Rate per 100,000, by drug type and year**

As with hospital admissions related to alcohol, there was geographic variation in illicit drug related admissions. As shown in Chart 8, the Aneurin Bevan Health Board area has the highest rate of admissions related to illicit drugs and also specifically of cannabinoid-related admissions. BCU showed the highest rates of both opioid and cocaine related admissions. It is notable from these figures that there is considerably more consistency between areas for some substances than for others. For cannabinoids, the highest recorded rate of admissions in 2015-16 was 48.9 per 100,000 (Aneurin Bevan) with the lowest rate recorded as 31 (Cardiff and Vale). For opioids, the highest rate was 106.8 in BCU, with Powys Teaching recording the lowest rate at 54.4.



Source: Substance Misuse Programme / NHS Wales Informatics Service, 2016

**Chart 8: Hospital admissions related to illicit drugs, individuals resident in Wales, European Age Standardised Rate per 100,000, by drug type and Health Board area. EASR for Wales shown in red**

### 3.7 Hospital admissions related to substance misuse: psychiatric admissions

Substance misuse related conditions that lead to hospital admission may be complex and long term, and may relate to a range of medical specialisms. Those with substance misuse issues may have contact with mental health services and this contact may shape their experience of both illness and recovery. Table 4 shows the number of admissions to psychiatric hospitals of individuals resident in Wales and the total number of admissions



which involved contact with the psychiatric specialism at any point during the hospital stay.

**Table 4: Admissions related to substance misuse, admission to psychiatric hospital and contact with psychiatric specialism (any hospital), numbers and proportion of all alcohol specific/illicit drug admissions**

		2011-12	2012-13	2013-14	2014-15	2015-16
<b>Admissions with alcohol specific condition in any position</b>	<b>Psychiatric hospital</b>	379 (2.5%)	411 (2.8%)	401 (2.6%)	320 (2.2%)	290 (2.0%)
	<b>Any contact with psychiatric specialism</b>	745 (4.9%)	780 (5.3%)	804 (5.2%)	711 (4.8%)	651 (4.5%)
<b>Admissions with condition related to illicit drugs in any position</b>	<b>Psychiatric hospital</b>	324 (6.4%)	405 (7.7%)	479 (8.1%)	450 (7.9%)	460 (7.5%)
	<b>Any contact with psychiatric specialism</b>	530 (10.4%)	619 (11.7%)	724 (12.2%)	702 (12.4%)	684 (11.1%)

**Source:** Substance Misuse Programme / NHS Wales Informatics Service, 2016

Admissions involving illicit drugs were considerably more likely to involve psychiatric services than those for alcohol specific conditions. Whilst there are no clear trends in data for the most recent five years, it is notably that both the numbers and the overall proportions of admissions related to alcohol specific conditions in which psychiatry is involved have fallen over the past five years, while those for conditions related to illicit drugs have risen.

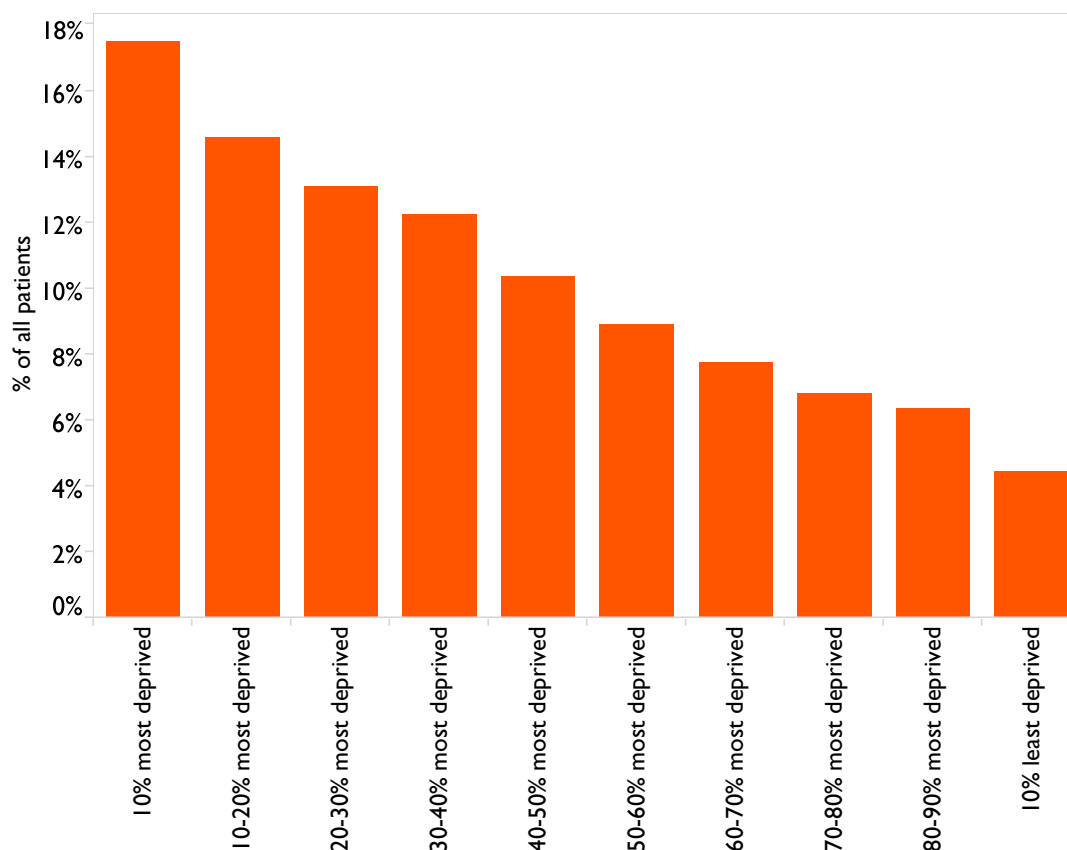
### 3.8 Substance misuse and deprivation

There is considerable evidence of a relationship between substance misuse and deprivation<sup>9</sup>. The Welsh Government has produced an index of multiple deprivation<sup>10</sup> which ranks every lower super output area (LSOA, small geographical areas with stable populations of about 1,500) on measures of deprivation. These measures allow every address in Wales to be allocated to a decile of deprivation, from areas in the 10 per cent most deprived rankings to those in the 10 per cent least deprived. Hospital admission data includes details of these deciles. Note that deprivation is a measure of the area in which an individual lives, rather than an evaluation of their particular circumstances.

<sup>9</sup> Local Government Association (2013) Tackling drugs and alcohol, local government's new public health role. [http://www.local.gov.uk/c/document\\_library/get\\_file?uuid=29b1bd72-bac4-46dd-9189-73ea23c38284&groupId=10180](http://www.local.gov.uk/c/document_library/get_file?uuid=29b1bd72-bac4-46dd-9189-73ea23c38284&groupId=10180)

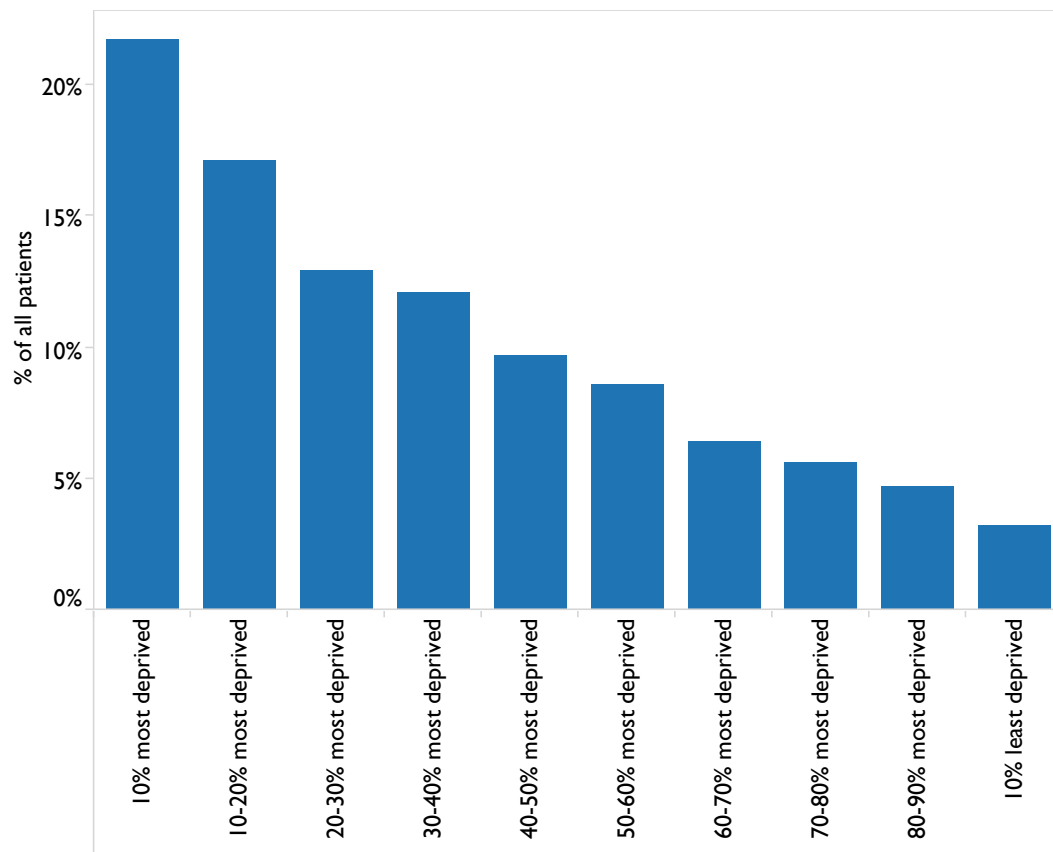
<sup>10</sup> Welsh Index of Multiple Deprivation (WIMD), <http://gov.wales/statistics-and-research/welsh-index-multiple-deprivation/?lang=en>

Chart 9 and Chart 10 show the percentages of all patients resident in Wales and admitted to hospital with alcohol specific and illicit drug related conditions respectively by each deprivation decile.



Source: Substance Misuse Programme / NHS Wales Informatics Service, 2016

**Chart 9: Percentage of all individuals resident in Wales admitted to hospital with an alcohol specific condition in any position falling into each deprivation decile, 2015-16**



Source: Substance Misuse Programme / NHS Wales Informatics Service, 2016

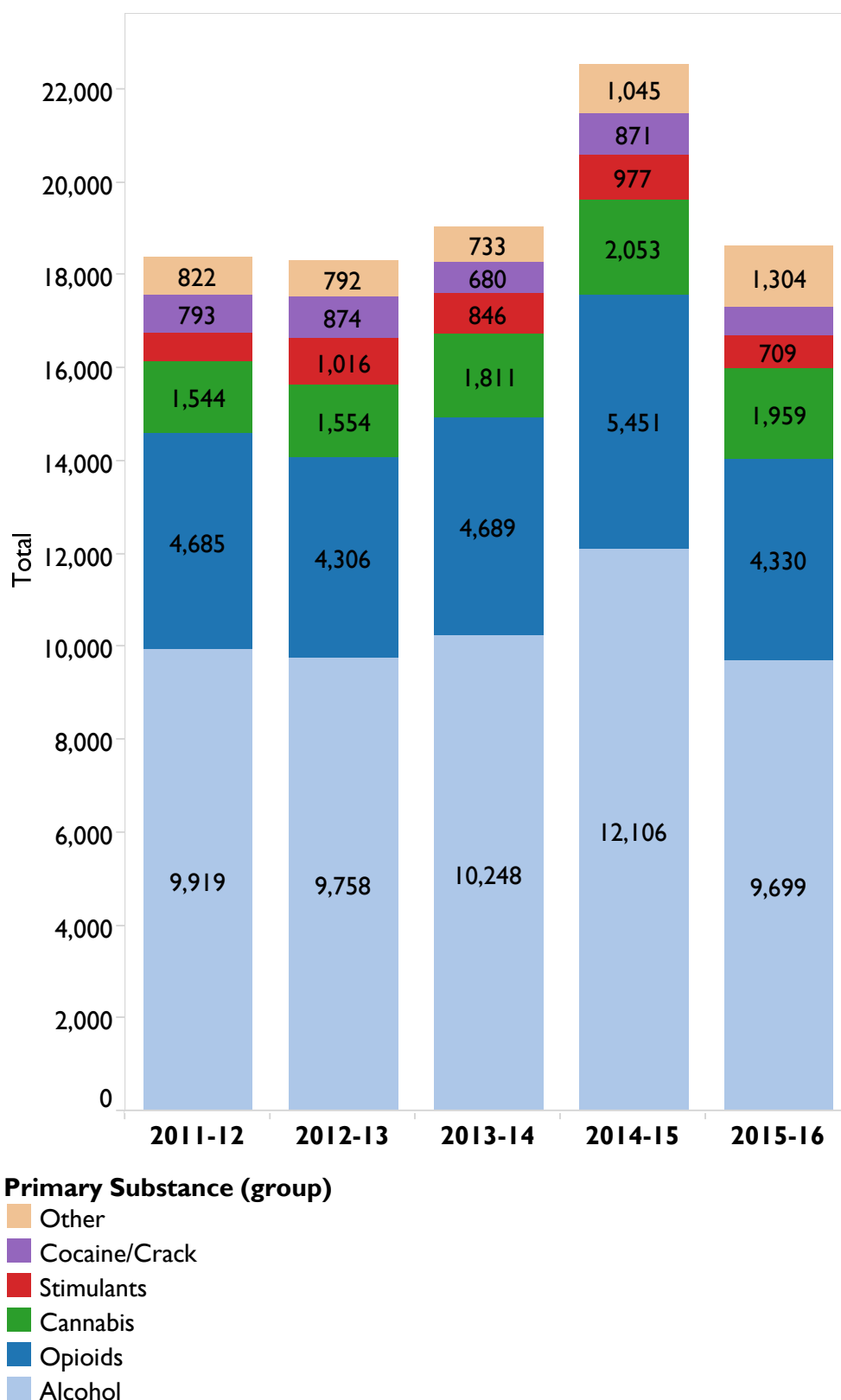
**Chart 10: Percentage of all individuals resident in Wales admitted to hospital with a condition related to illicit drugs in any position falling into each deprivation decile, 2015-16**

The two charts above show a clear gradient amongst patients resident in Wales and admitted to hospital in relation to alcohol or illicit drugs in 2015-16. The percentage of all patients admitted for alcohol specific conditions who lived in the 10 per cent of most deprived areas was 17.5 per cent. Only 4.5 per cent of those admitted lived in the 10 per cent least deprived areas. Amongst those admitted for conditions related to use of illicit drugs, the contrast was even more striking, with 21.8 per cent of all those admitted living in the bottom 10 per cent of areas in terms of deprivation and only 3.2 per cent living in the 10 per cent of least deprived areas.

### 3.9 Substance misuse service assessments

There were 18,613 assessments carried out by substance misuse services in Wales in 2015-16. This figure represents a fall of 17.3 per cent compared to the number of assessment in the previous year, but is similar to the number carried out in the three years prior, when assessment ranged from 18,300 (2012-13) to 19,007 (2013-14). These assessments involved 13,614 individuals, a fall of 5.7 per cent on the previous year. Of those individuals, 9,143 (67.2 per cent) were men and 4,471 (32.9 per cent) were women.

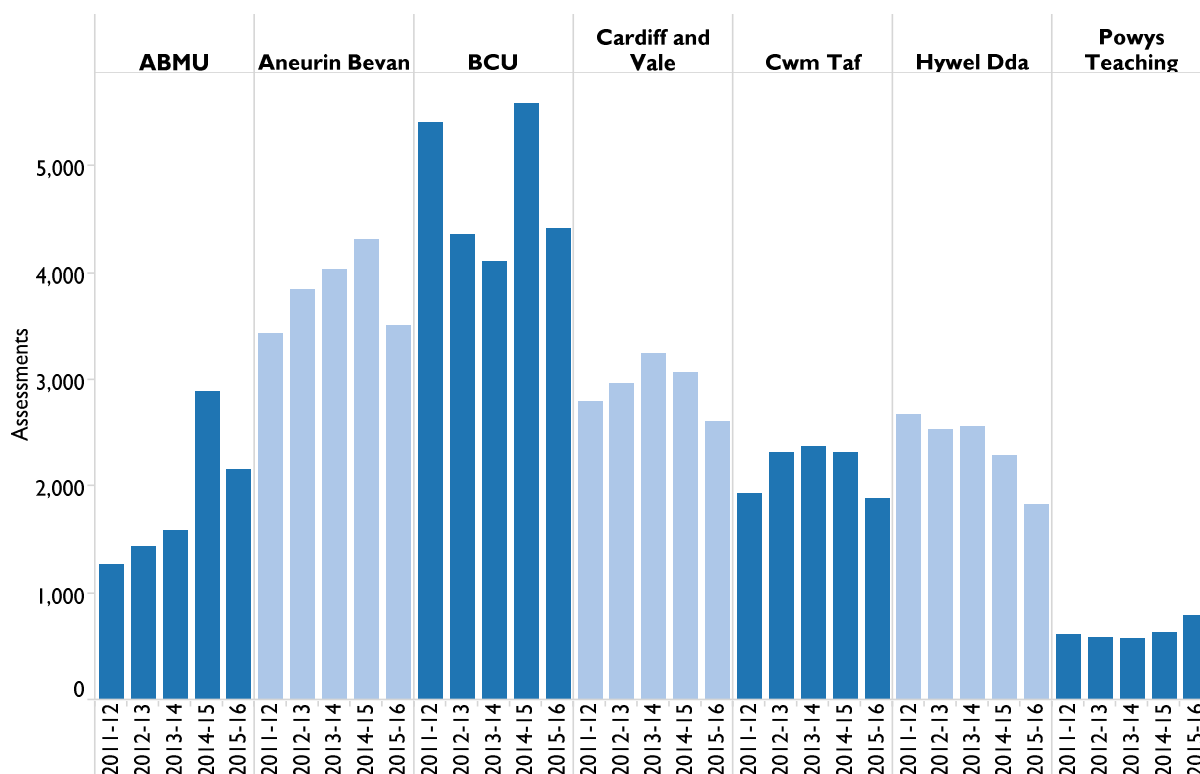
As in previous years, alcohol was most frequently reported by those attending assessments as the primary substance for which they were seeking treatment, with 9,699 assessments (52.1 per cent of all assessments). Opioids, principally heroin, were cited as the primary substance at 4,330 assessments (23.3 per cent), with cannabis the next most frequently reported at 1,959 assessments (10.5 per cent). These percentages were stable year on year, with the proportion of assessments citing cannabis rising by 1.4 percentage points and the proportion citing opioids and alcohol falling by 0.9 and 1.7 percentage points respectively. One notable continuing trend has been the decline in mentions of mephedrone by those assessed by substance misuse services in Wales. In 2012-13, there were 465 assessments in which mephedrone was recorded as the main problematic substance, a substantial increase from the 93 reported in the previous year. However, in 2014-15 only two assessments citing primary mephedrone use were recorded and this fell to none in 2015-16. The number of assessments by year and by primary substance reported are shown in Chart 11.



Source: Welsh National Database for Substance Misuse, 2016

**Chart 11: Substance misuse assessments carried out by services in Wales, by year and primary substance of use reported at assessment**

Changes in the number of substance misuse assessments, by health board area over the most recent five years are shown in Chart 12. The number of assessments fell in all areas except Powys Teaching, which recorded 784 assessments, the lowest number of any Health Board area. BCU, the area with the highest number of assessments (4,422) showed a substantial fall of 21 per cent on 2014-15. However, over five years, there are no obvious common trends, with three Health Board areas recording a rise in the number of assessments between 2011-12 and 2015-16 (ABMU, Aneurin Bevan and Powys Teaching) and the remainder recording fewer assessments.

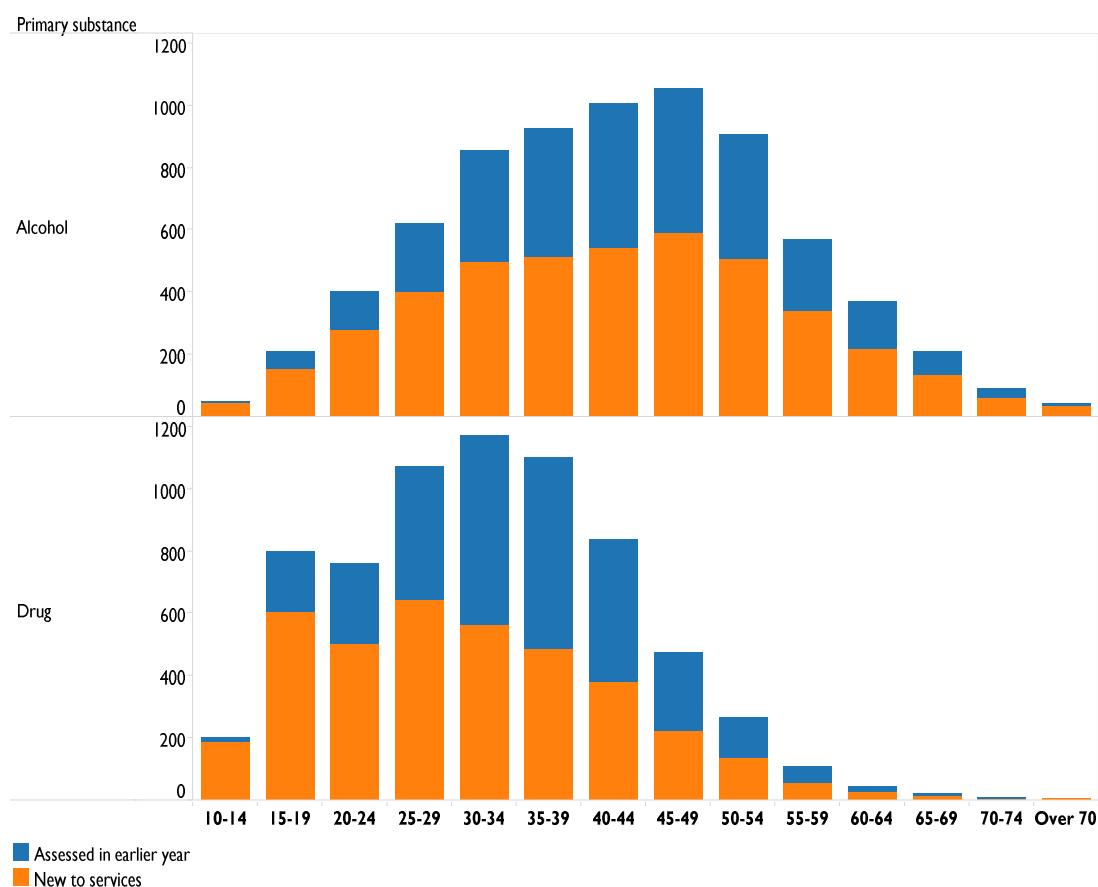


Source: Welsh National Database for Substance Misuse, 2016

**Chart 12: Substance misuse assessments carried out by services in Wales, by year and Health Board**

### 3.9.1 New individuals in contact with specialist substance misuse services

There were 7,884 individuals assessed in 2015-16 who had not previously been recorded as having an assessment with a substance misuse service in Wales, shown by age band in Chart 13. This represents 57.9 per cent of all individuals assessed in that year.



Source: Welsh National Database for Substance Misuse, 2016

**Chart 13: Number of individuals assessed by substance misuse services in Wales in 2015-16 by primary substance reported (alcohol or drug) and by previous service contact**

The proportion of individuals assessed in 2015-16 who were new to services was highest at the younger and older age bands, with the percentage of individuals who had already had an assessment in a previous year rising to 50.7 per cent amongst those aged 35-39, before gradually reducing as age bands increase. The proportion of men and women who were new to services was almost identical, at 58.1 per cent and 57.5 per cent respectively.

## **4. Pre and post-natal health**

In the context of all hospital admissions related to alcohol or drugs, relatively few are recorded for medical conditions involving harm to fetuses and newborns as a result of the use of alcohol or other drugs of addiction. See Appendix I for technical definitions of the conditions described in this section.

### **4.1 Conditions originating in the perinatal period: Foetal alcohol syndrome**

Foetal alcohol syndrome (FAS) arises from maternal use of alcohol during pregnancy<sup>11</sup>. It is a serious condition that typically results in affected children experiencing restricted growth, learning and behavioural disorders and physiological problems. There were six admissions of Welsh residents to hospital in 2015-16 in which a diagnosis of FAS was recorded in any diagnostic position. This represents a reduction on the previous year, in which ten admissions were recorded. No trend is observable in the number of admissions for FAS over the past ten years and such small numbers preclude further analysis.

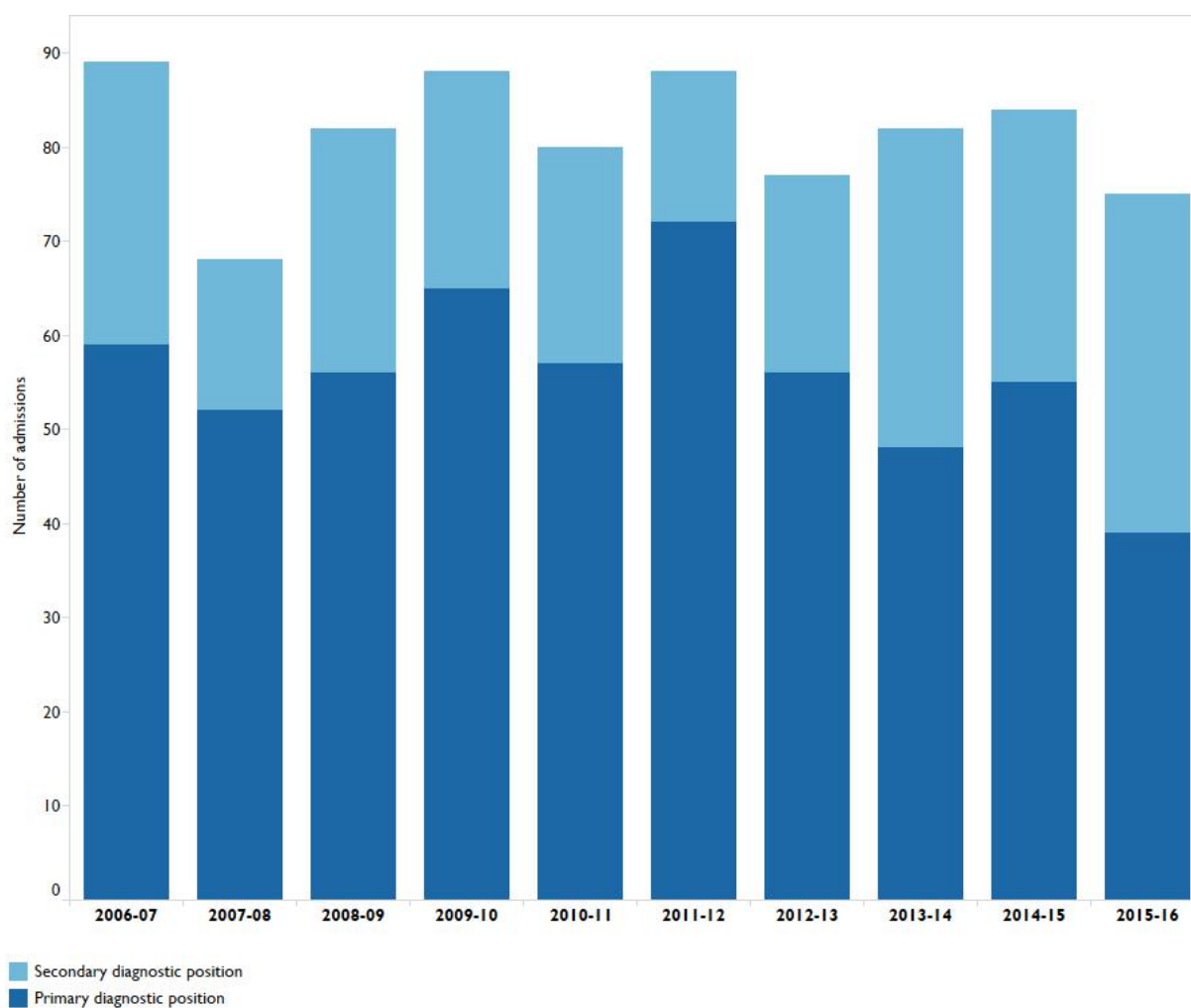
### **4.2 Foetus and New-borns affected by maternal use of or withdrawal from drugs of addiction**

Hospital admissions for fetuses and new-borns affected by maternal use, or withdrawal from, of alcohol or other drugs of addiction have remained very stable over recent years (see Appendix I for detailed definition). In 2015-16 there were 75 admissions of Welsh residents in which these conditions were recorded in any diagnostic position, with a relevant condition recorded in the primary position in 39 cases (52 per cent). The number of admissions for these conditions was the lowest since 2007-08, when 68 admissions were recorded and represents a fall of 16.9 per cent on the 89 admissions recorded in 2006-07, the largest annual count of admissions over the past ten years. Chart 14 shows the number of admissions for conditions related to maternal use of/withdrawal from drugs of dependency for the most recent ten years, by diagnostic position.

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<sup>11</sup> Further information on Foetal Alcohol Syndrome and related conditions is available at: <http://www.nhs.uk/Conditions/foetal-alcohol-syndrome/Pages/Introduction.aspx>





Source: Substance Misuse Programme, 2016

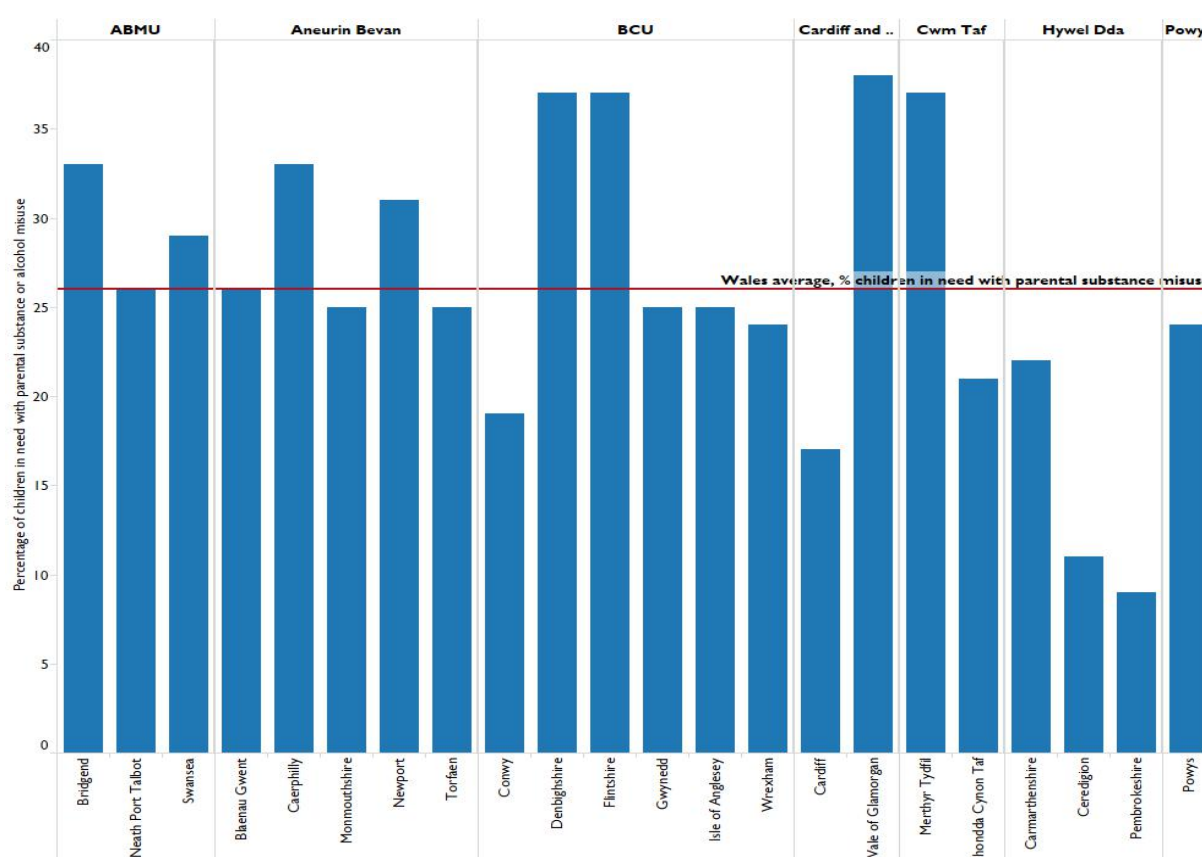
**Chart 14: Number of hospital admissions of fetuses and newborns affected by maternal use or withdrawal from alcohol and/or drugs of addiction, Welsh residents, 2006-16**

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

## 5.1 School aged children

### 5.1.1 Children in need<sup>12</sup> with parental substance misuse

There were 4,965 children in need registered with local authorities at 31 March 2015<sup>13</sup> due to parental substance misuse, a fall of 3 per cent on the figure for 2014. As in previous years, there was considerable variation between local authorities in the proportion of children in need with parental substance misuse, as shown in Chart 15.



**Source:** Welsh Government, 2015

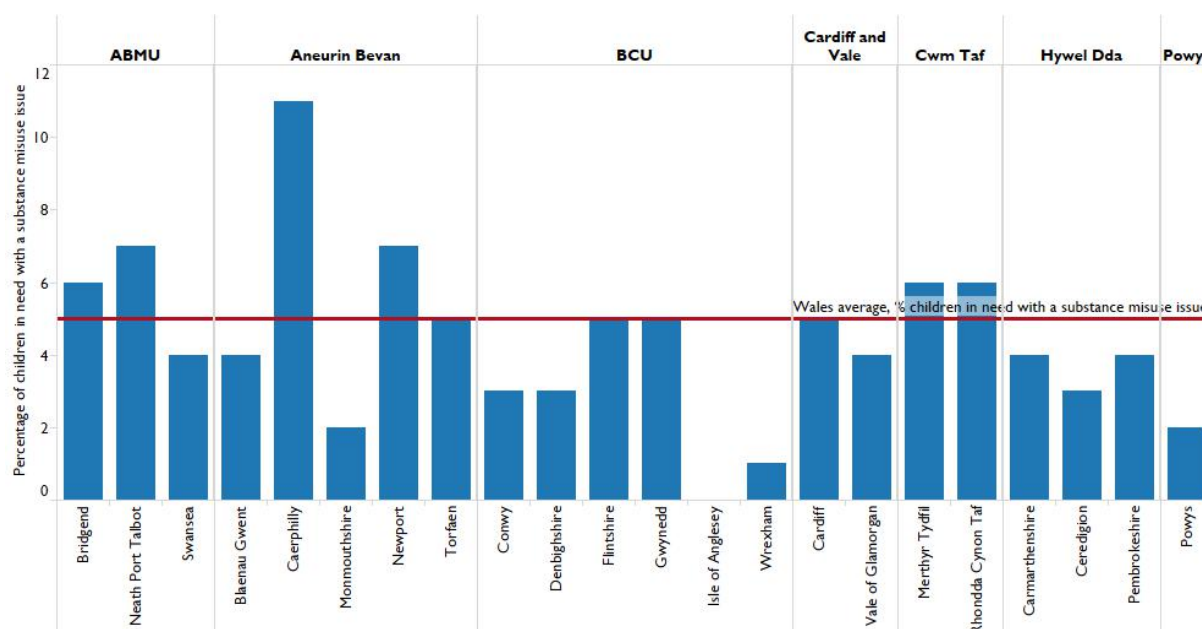
**Chart 15: Children in need in Wales, percentage with parental substance misuse problems by local authority, 31 March 2015**

As at 31 March 2015, the number of children in need for whose own substance misuse was identified as a problem was 975, 9.3 per cent less than the previous year. The

<sup>12</sup> 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.

<sup>13</sup> 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.

percentage of children in need with substance misuse problems is shown by local authority in Chart 16. The falls in both the number of those with substance misuse problems and those with parental substance misuse problems occurred in the context of a reduction in the total number of children in need between these two dates of 3.8 per cent.



Source: Welsh Government, 2015

**Chart 16: Children in need in Wales, percentage with substance misuse problem by local authority, 31 March 2015 (NB figure for Isle of Anglesey censored due to low numbers)**

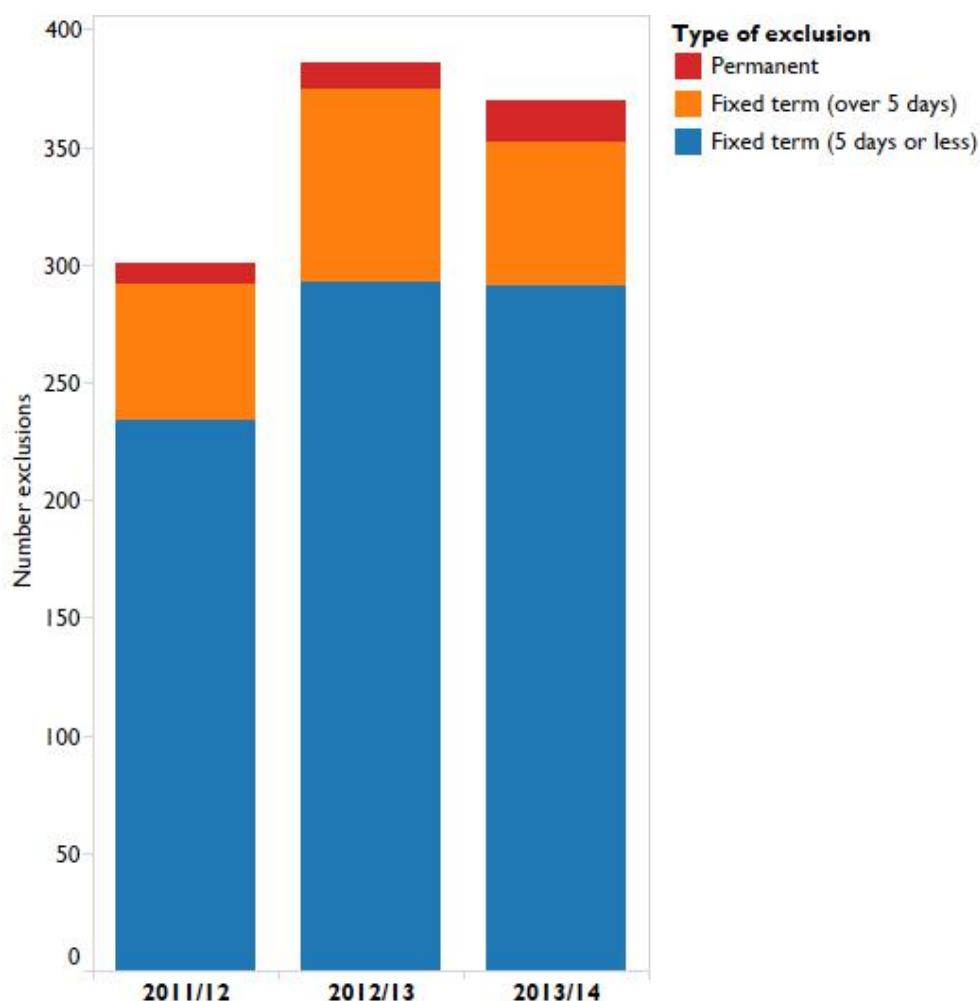
Caerphilly local authority area reported the largest number of cases, (n=135) of children in need with substance misuse problems and the highest proportion at 11 per cent. Neath Port Talbot and Newport were the local authorities with the second highest proportion (7 per cent). The Isle of Anglesey was the local authority with the smallest proportion of children in need with substance misuse problems and was one of five local authorities to report ten or fewer cases, namely Ceredigion, Denbighshire, Monmouthshire and Wrexham.

For children in need with parental substance misuse issues, the local authorities with the greatest proportion of cases were Vale of Glamorgan (38 per cent), Denbighshire, Flintshire and Merthyr Tydfil (each with 37 per cent). The local authorities with the lowest proportions were Pembrokeshire (9 per cent) and Ceredigion (11 per cent) with 45 and 50 cases respectively. The local authority with the largest number of cases was Swansea (505) followed by Rhondda Cynon Taf (445).

There was no consistent relationship between the proportion of children in need with substance misuse problems and the percentage with parental substance misuse problems when compared between local authorities. Figures for 2015 were broadly comparable to those for 2014.

### 5.1.2 School exclusions due to substance misuse<sup>14</sup>

In 2013-14, the most recent year for which statistics are available, the number of school exclusions related to drugs or alcohol fell overall from 386 to 370 (4.1 per cent) and in each category of exclusion. These changes are shown in Chart 17.

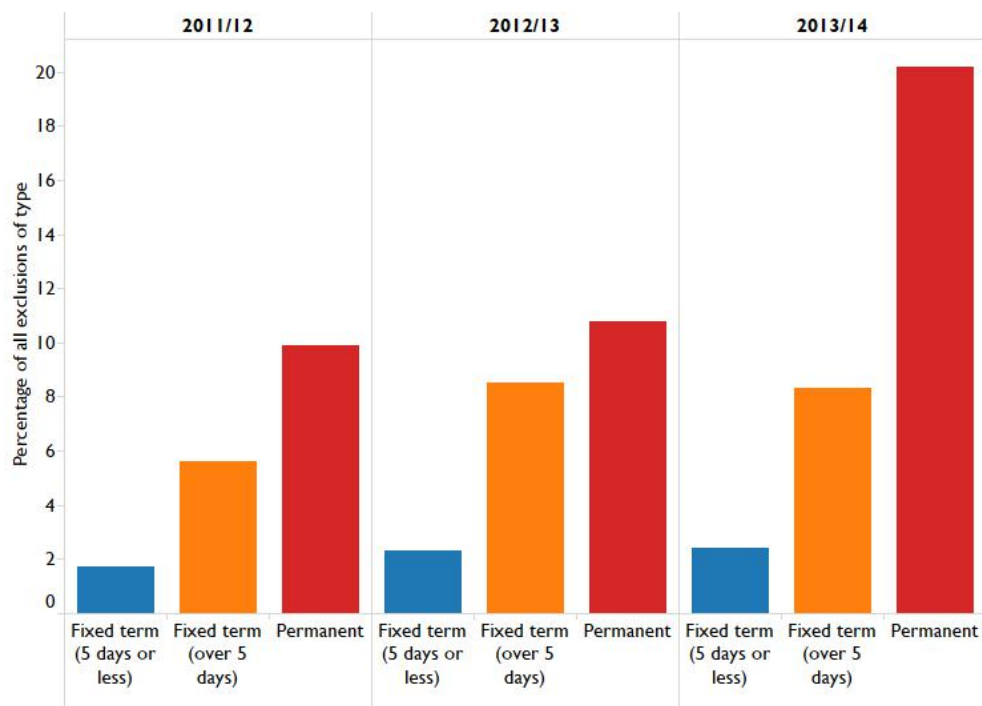


Source: Welsh Government, 2015

**Chart 17: Number of exclusions from Welsh schools related to drugs and alcohol, 2011-14, by type of exclusion**

However, whilst drug and alcohol related exclusions in 2013-14 made up a similar proportion of fixed term exclusions compared to the 2012-13, the proportion of all permanent exclusions accounted for by drug and alcohol related incidents almost doubled from 10.8 per cent of all permanent exclusions to 20.2 per cent. Figures for the most recent three years for which data are available are shown in Chart 18.

<sup>14</sup> Note that the methodology for producing these data has changed and therefore the figures in this report may not match those presented in previous reports <http://gov.wales/statistics-and-research/exclusions-schools/?lang=en>



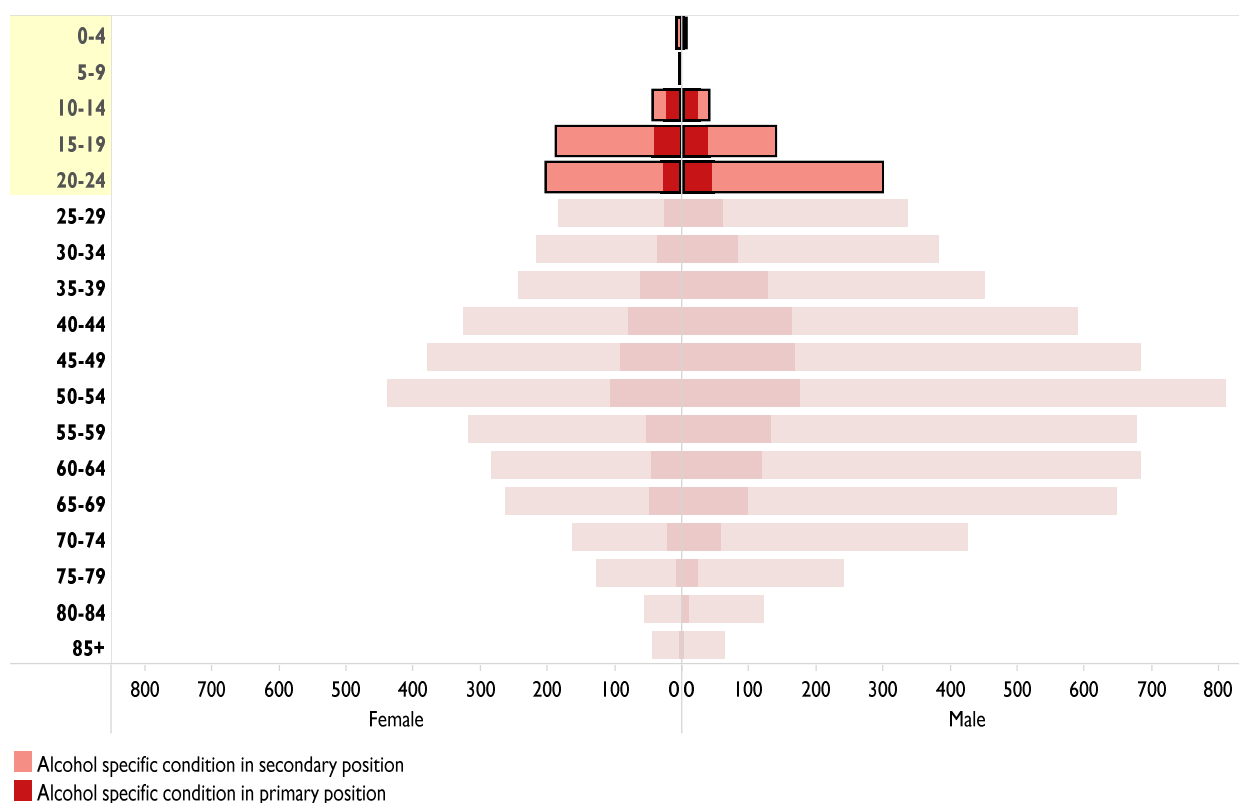
Source: Welsh Government, 2015

**Chart 18: Proportion of exclusions in Welsh schools which are related to drugs and alcohol, by type of exclusion**

## 6. Children and young people aged up to 24

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

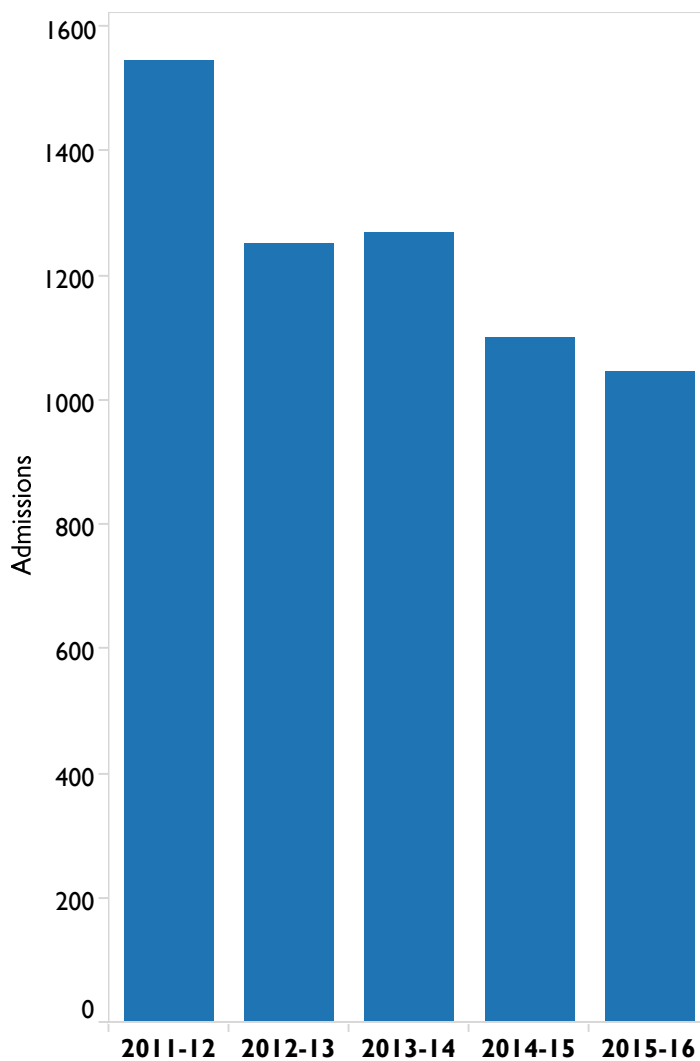
There were 1,043 admissions involving young people aged under-25 with an alcohol specific condition in 2015-16, a fall of 5.2 per cent compared with 2014-15. The 231 admissions with an alcohol specific code in the primary position accounted for 21.4 per cent of all admissions for under-25s. These admissions involved a total of 918 individuals, 5.9 per cent less than in the previous year. Of these 918 individuals, over half (n= 480, 52.3 per cent) were men. Chart 19 shows the number of admissions for alcohol specific conditions amongst under-25s resident in Wales in 2015-16 by gender, age and diagnostic position of an alcohol specific diagnosis.



Source: Substance Misuse Programme / NHS Wales Informatics Service, 2016

**Chart 19: Young people under 25 resident in Wales admitted to hospital with an alcohol specific condition, by gender, age and diagnostic position of alcohol related condition, 2015-16. Where an individual was admitted more than once, the first admission was included**

Chart 20 shows the number of admissions involving young people aged 25 or under with an alcohol specific condition by year. As can be seen from this Chart, admissions involving this age cohort have been declining over both one year and five years, by 5.2 per cent and 32.4 per cent respectively, to 1,043 in 2015-16. This age cohort accounted for 9.1 per cent of those admitted to hospital with an alcohol specific condition in 2015-16. This proportion has also declined since both 2014-15, when under 25s made up 9.6 per cent of individuals admitted and 2011-12, when 13 per cent of all those admitted were aged 0 to 24.

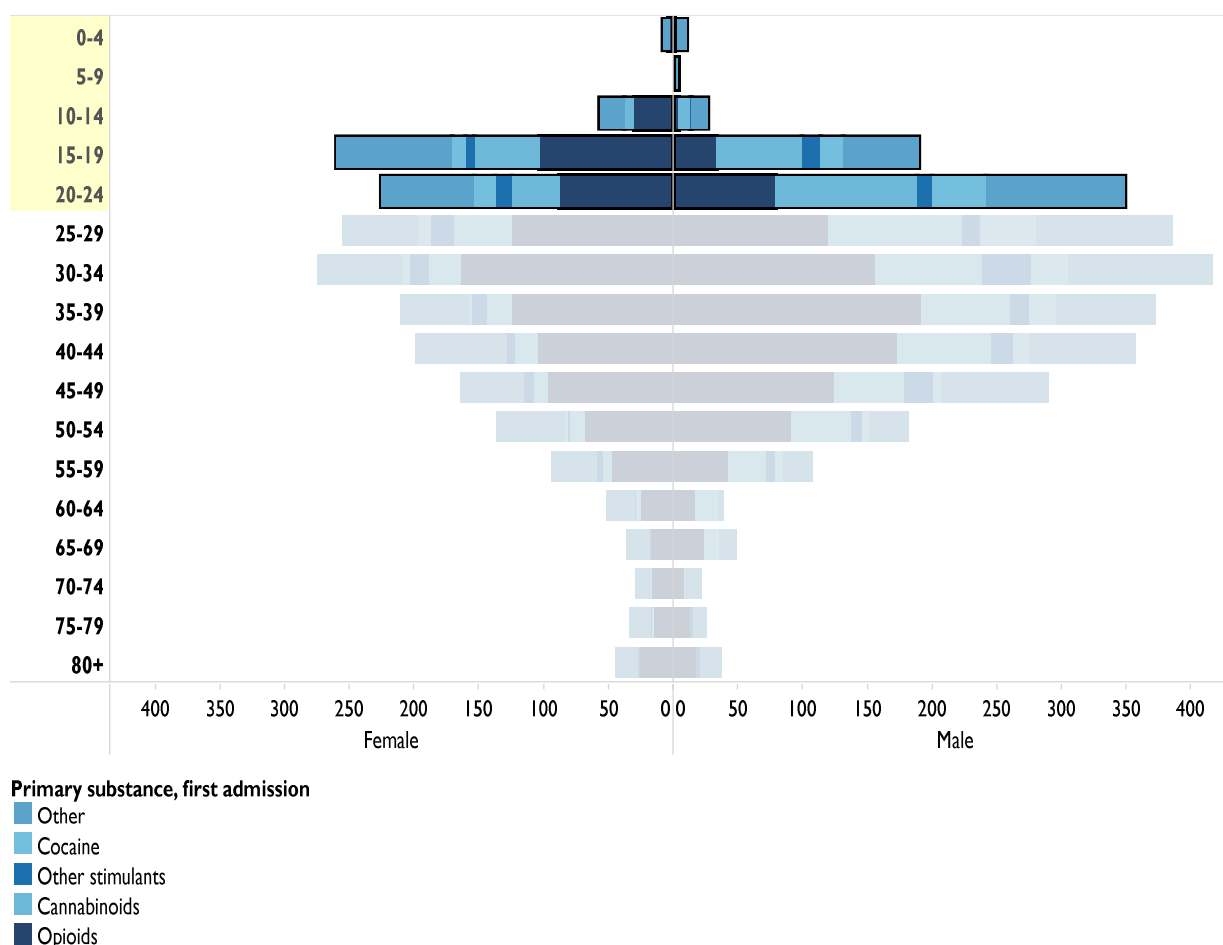


Source: Substance Misuse Programme / NHS Wales Informatics Service, 2016

**Chart 20: Admissions involving young people under 25 resident in Wales with an alcohol specific condition, by year**

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

There were 1,314 admissions of young people aged under-25 for conditions related to illicit drugs in 2015-16, a rise of 10.4 per cent on 2014-15. These admissions involved 1,083 individuals in this age group: the year on year increase in this figure was 14.2 per cent. Individuals aged up to 24 made up 23 per cent of all those admitted to hospital in 2015-16, an increase on the previous year when young people represented 21.8 per cent of all admitted following illicit drug use. This age cohort divided almost evenly by gender, with 51.3 per cent of those admitted male and 48.7 female, in line with previous years. Chart 21 shows the number of young people aged under 25 resident in Wales and admitted to hospital following use of illicit drugs in 2015-16.

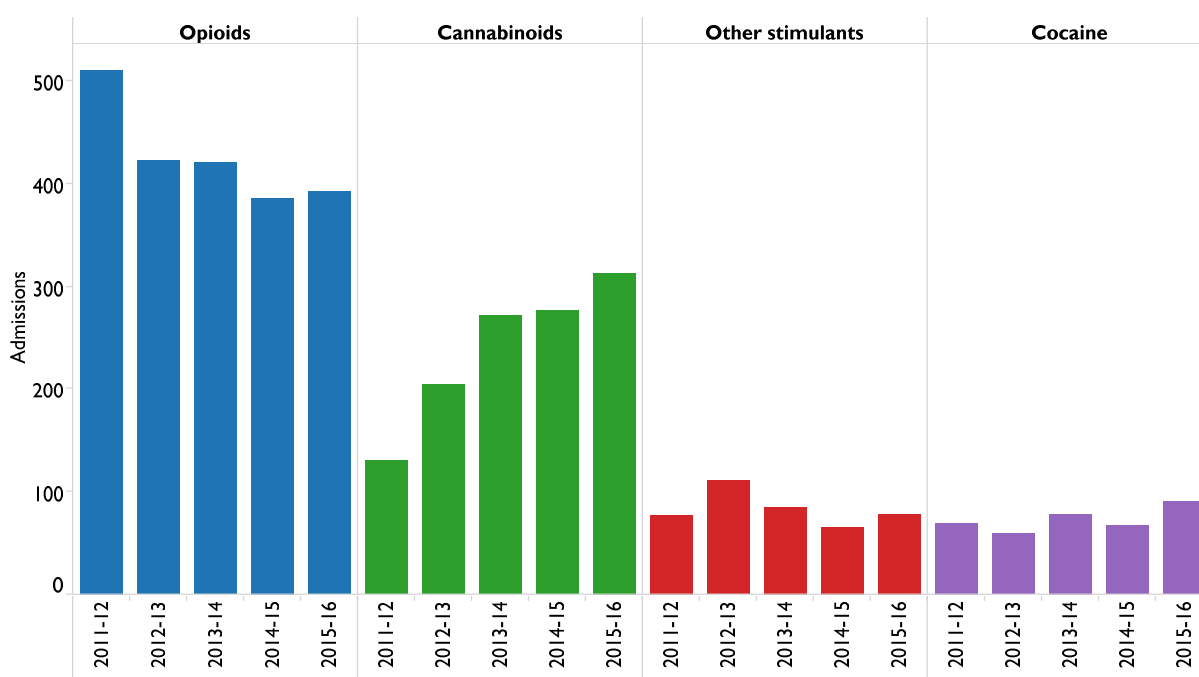


Source: Substance Misuse Programme / NHS Wales Informatics Service, 2016

**Chart 21: Young people under 25 resident in Wales admitted to hospital with a condition related to illicit drugs, by gender, age and primary substance used, 2015-16. Where an individual was admitted more than once, the first admission was used. Where more than one substance was recorded, they were assigned in the order opioid-cocaine-other stimulants – cannabinoids – other.**

Chart 22 shows the number of illicit drugs related admissions by substance over the past five years for those under 25. There were 392 admissions related to opioids, a slight increase on the 386 recorded in 2014-15 and the most frequently reported substance. However, whilst the number of opioid related admissions has fallen by 23.1 per cent over the past five years, the number of cannabinoid-related admissions has more than doubled over the same period, from 130 in 2011-12 to 312 in 2015-16. No obvious trends in relation to admissions for other stimulants and cocaine are observable, with admissions numbers for 2015-16 recorded as 79 and 90 respectively.





**Source:** Substance Misuse Programme / NHS Wales Informatics Service, 2016

**Chart 22: Admissions to hospital involving young people under 25 resident in Wales with a condition related to illicit drugs, year and primary substance used. Where more than one substance was recorded, they were assigned in the order opioid-cocaine-other stimulants – cannabinoids – other**

### 6.3 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 online.<sup>15</sup>

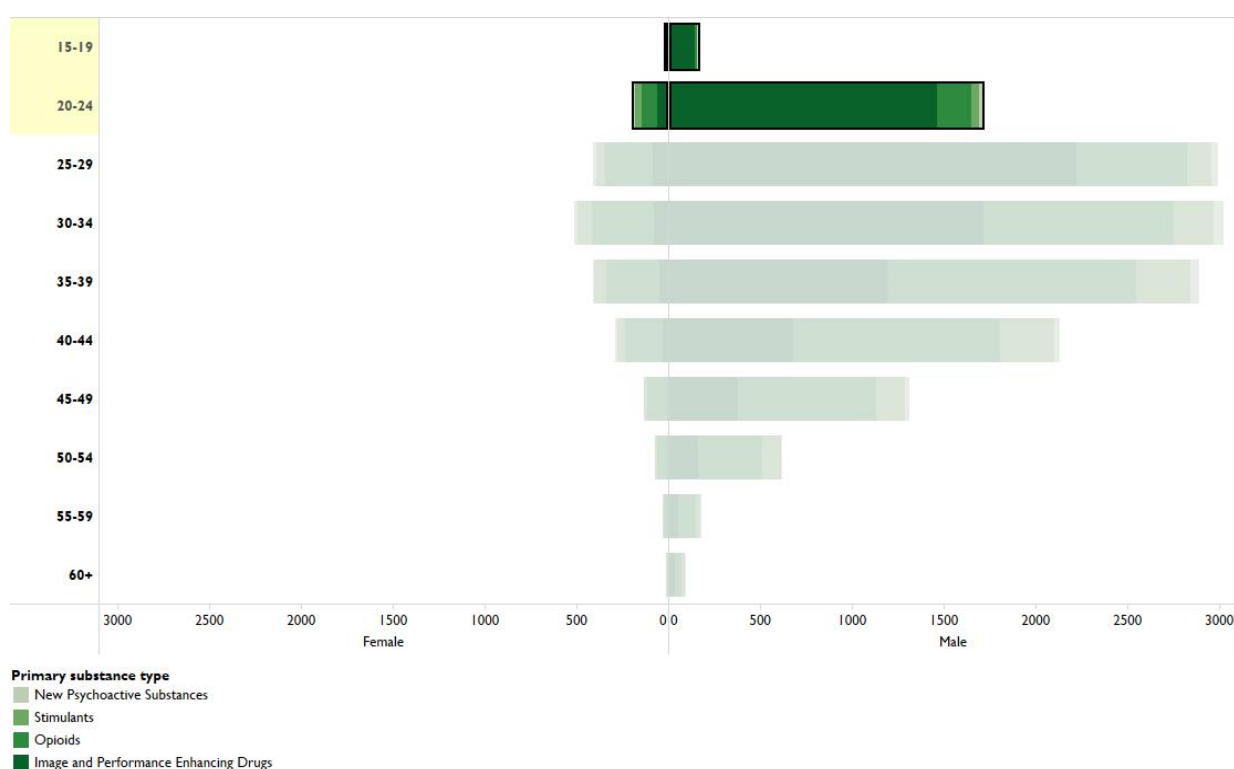
The data presented in this report relates to individuals considered to be ‘regular’ users of NSPs in Wales: those accessing two or more times in the current year, and/or recorded as accessing across multiple years. Whilst injecting and problematic drug use frequently involves use of more than one substance, data in this report are presented by primary substance type.

Chart 23 shows the number of individuals under 25 accessing NSP services in Wales in 2015-16 by gender and primary substance of use. In total, 2,070 individuals under 25

<sup>15</sup> See <http://www.wales.nhs.uk/sitesplus/888/page/72997> for further details about the Harm Reduction Database

regularly accessed NSPs in Wales in 2015-16, making up 12.1 per cent of all service users in 2015-16. This suggests that 5 Welsh residents per 1,000 aged between 15 and 29 accessed an NSP regularly in 2015-16. The majority of under-25s accessing NSPs were male (1,870 individuals, 90.3 per cent); a total of 1,668 (80.6 per cent) reported image and performance enhancing drugs as being their primary substance of use. Opioids were the second most frequently reported primary drug of use, with 286 individuals (13.8 per cent), followed by stimulants (89 individuals, 4.3 per cent) and new psychoactive substances (27 individuals, 1.3 per cent).

There was a fall of 23.4 per cent in the number of young people recorded as regularly accessing NSPs in Wales in 2015-16 compared with the previous year. This is in the context of an overall fall of 1.1 per cent across all ages. This reduction in numbers was recorded proportionally across all substance types and does not therefore reflect a change in patterns of substance use across this age group as a whole, but evidences a reduction in injecting, injecting frequency or reduction in accessing NSP services. Further research is required to establish the cause of this reduction.

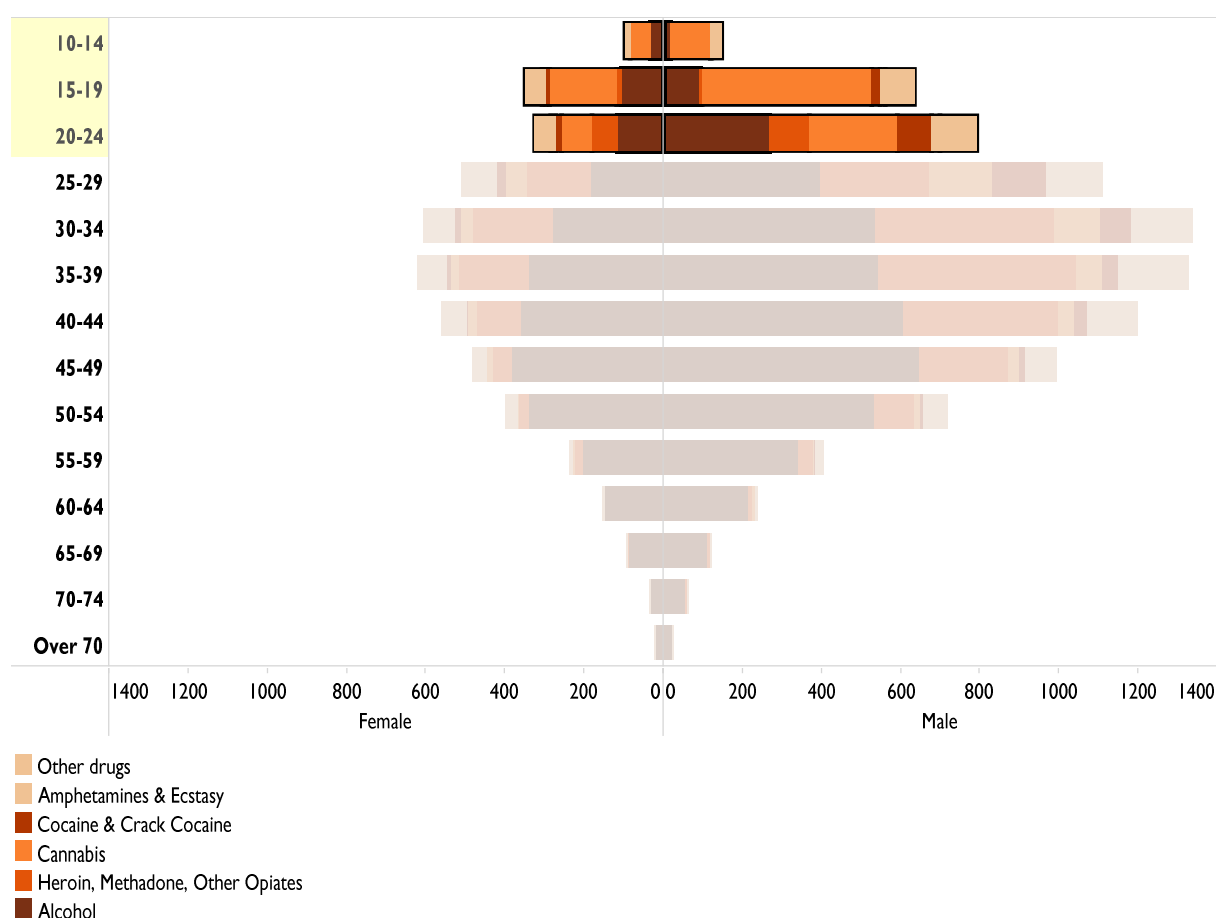


Source: Harm Reduction Database, 2016

**Chart 23: Number of young people aged under 25, regularly accessing NSP services by gender, age band and primary substance of use, Wales, 2015-16**

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

In 2015-16 there were 2,940 assessments of young people aged under 25, a reduction of 20.5 per cent from 2014-15. These assessments involved 2,348 individuals a reduction of 14.6 per cent on the previous year. The fall in the number of individuals assessed was most marked amongst those aged 15-19 within this age cohort, with a decline of 19 per cent year on year. Individuals in this age group made up a slightly smaller proportion of all individuals assessed at 17.4 per cent compared with 19.2 per cent in 2014-15. Chart 24 shows figures for this age group by gender, age and primary substance reported as problematic.

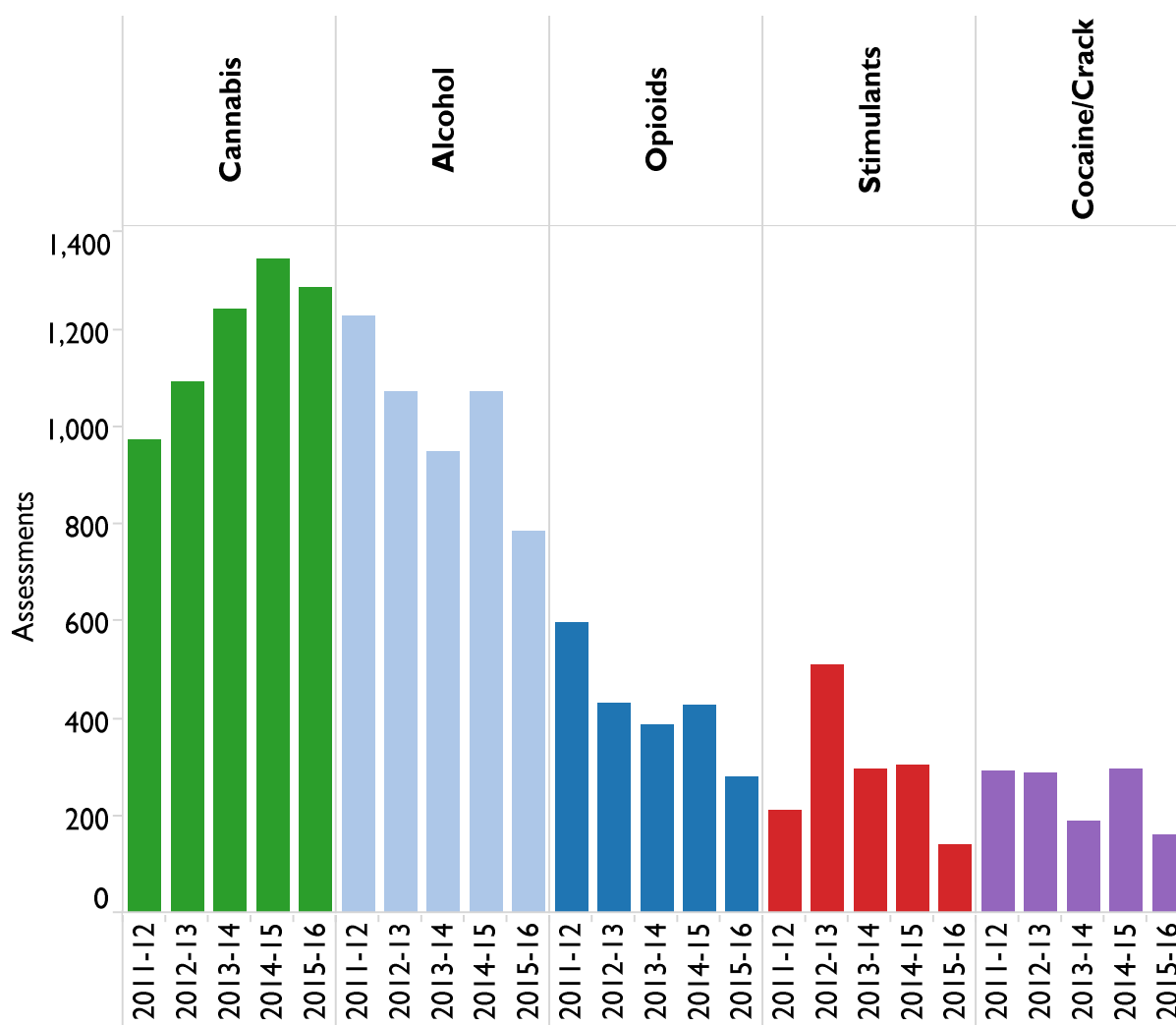


Source: Welsh National Database for Substance Misuse, 2016

**Chart 24: Young people under 25 assessed by substance misuse services in Wales, by gender, age band and primary substance reported as problematic, 2015-16. Where an individual was assessed more than once, details were taken from the first assessment**

Chart 25 shows the number of assessments by year and by primary substance reported at assessment in this age group. Despite a fall of 4.5 per cent compared with the previous year, cannabis remains the substance most frequently reported as problematic at assessments of young people. The number of assessments at which cannabis was recorded

as the main substance was higher in 2015-16 than for 2011-12. This is in notable contrast to other substance types, with fewer assessments at which young people under 25 recorded alcohol, opioids, stimulants or crack/cocaine in 2015-16 than in 2011-12.



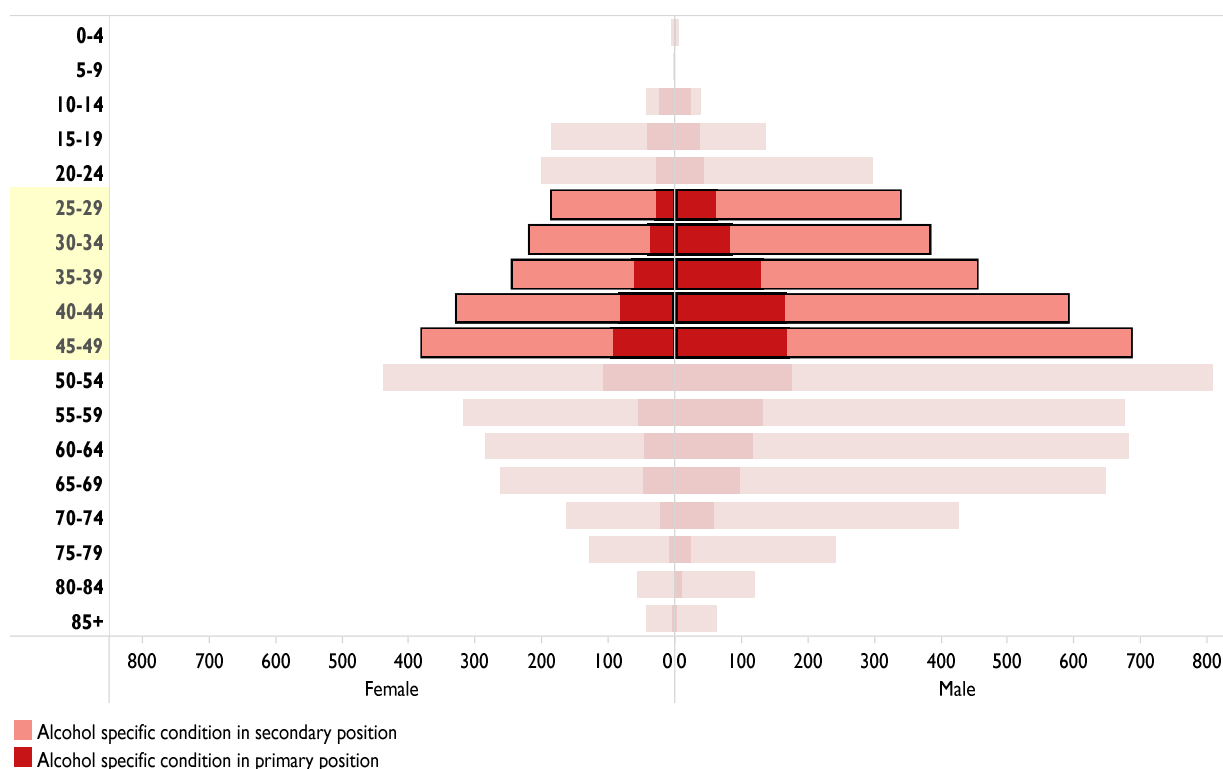
Source: Welsh National Database for Substance Misuse, 2016

**Chart 25: Substance misuse assessments carried with young people under 25, by year and primary substance reported as problematic, Wales**

## 7. Working age adults (aged 25 to 49 years)

### 7.1 Hospital admissions for alcohol specific conditions, working age adults

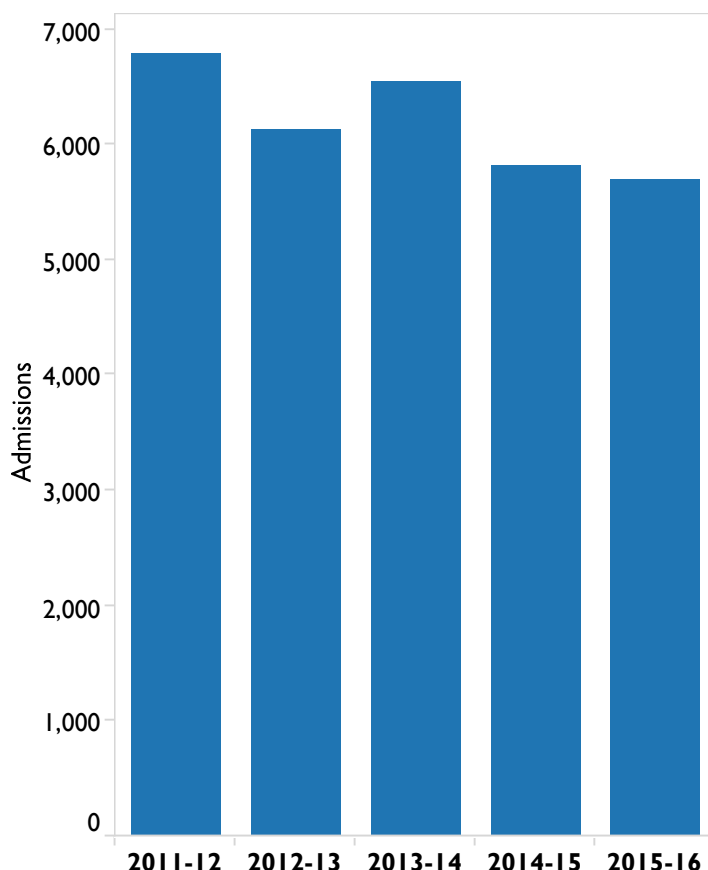
There were 5,689 admissions involving individuals aged 25-49 for alcohol specific conditions in 2015-16 of which 1,574 (27.7 per cent) contained an alcohol specific code in the primary position. In terms of overall admissions, this was a fall of 2.1 per cent on 2014-15. These admissions involved 3,786 individuals, 1.9 per cent fewer than the previous year and a 15.7 per cent reduction on 2011-12. Men made up 64.6 per cent of those in the working age cohort, a proportion that has been stable over the past five years. Working age adults represented 38.2 per cent of all those admitted in 2015-16. This proportion was similar to the previous year, at 38.4 per cent, but notably less than in 2011-12 when those aged 25-49 made up 44.2 per cent of all those admitted. Chart 26 shows individuals of working age admitted to hospital in 2015-16 with an alcohol specific condition by gender, age and diagnostic position of an alcohol related condition.



Source: Substance Misuse Programme / NHS Wales Informatics Service, 2016

**Chart 26: Working age people aged 25-49 resident in Wales admitted to hospital with an alcohol specific condition, by gender, age and diagnostic position of alcohol related condition, 2015-16. Where an individual was admitted more than once in the year, the diagnostic position of first admission was included**

Chart 27 shows the number of admissions involving those of working age including an alcohol specific condition. The number of admissions has fallen by 16.2 per cent since 2011-12. However, there is no clear trend in the data over the past five years.



Source: Substance Misuse Programme / NHS Wales Informatics Service, 2016

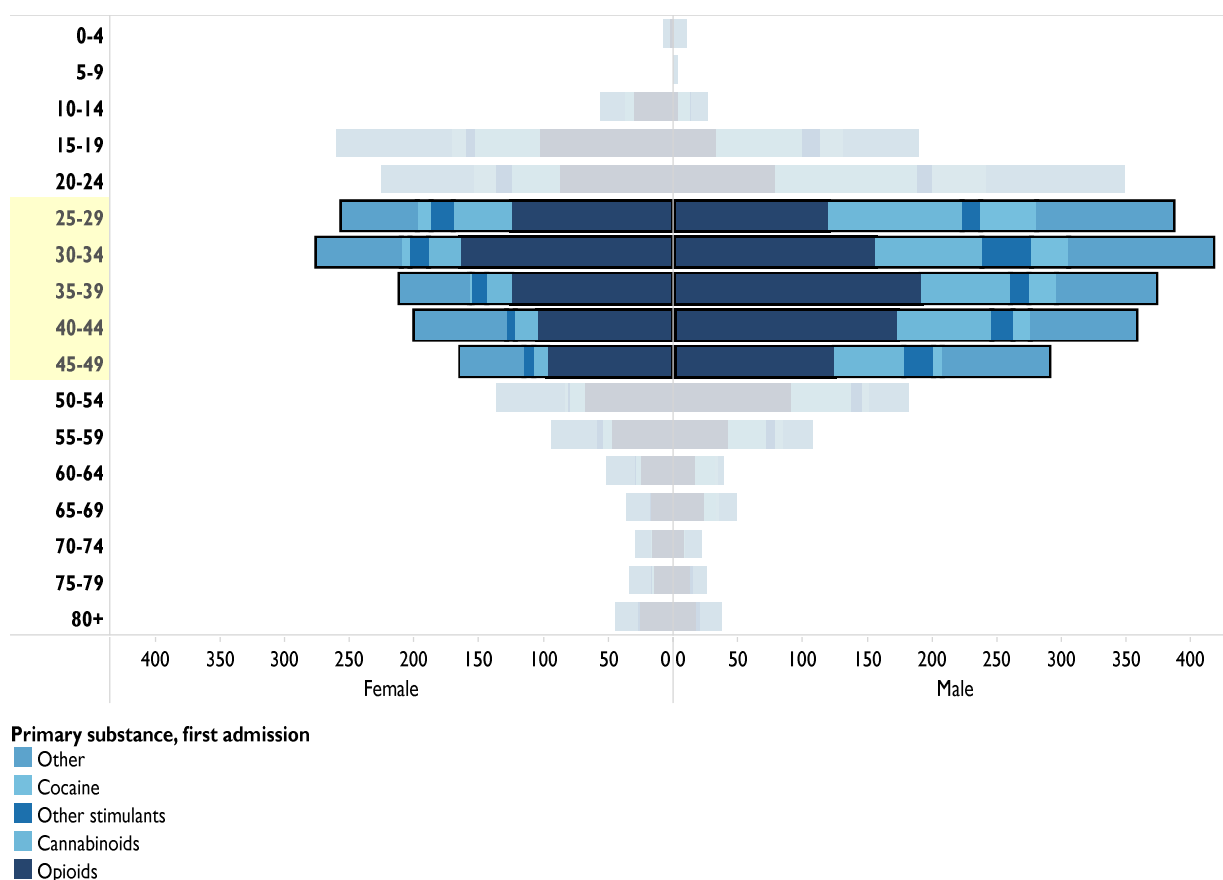
**Chart 27: Admissions involving working aged people aged 25-49 resident in Wales with an alcohol specific condition, by year**

## **7.2 Hospital admissions for poisoning by illicit drugs in working aged people (25-49)**

There were 3,771 admissions related to the use of illicit drugs for this age cohort, relating to 2,823 individuals. These numbers represented a fall of 8.2 per cent and 7.4 per cent respectively when compared with 2014-15.

Individuals aged 25-49 made up 59.5 per cent of all those admitted for illicit drug related conditions in 2015-16. The gender split in this age cohort was substantially different to that found amongst younger people, with men making up 62.1 per cent of those admitted in 2015-16. This proportion has risen slightly year on year every year from 58.9 per cent in 2011-12. Within this age cohort, 30-34 was the age band in which the largest proportion of individual admissions was recorded, with the 668 individuals. Chart 28

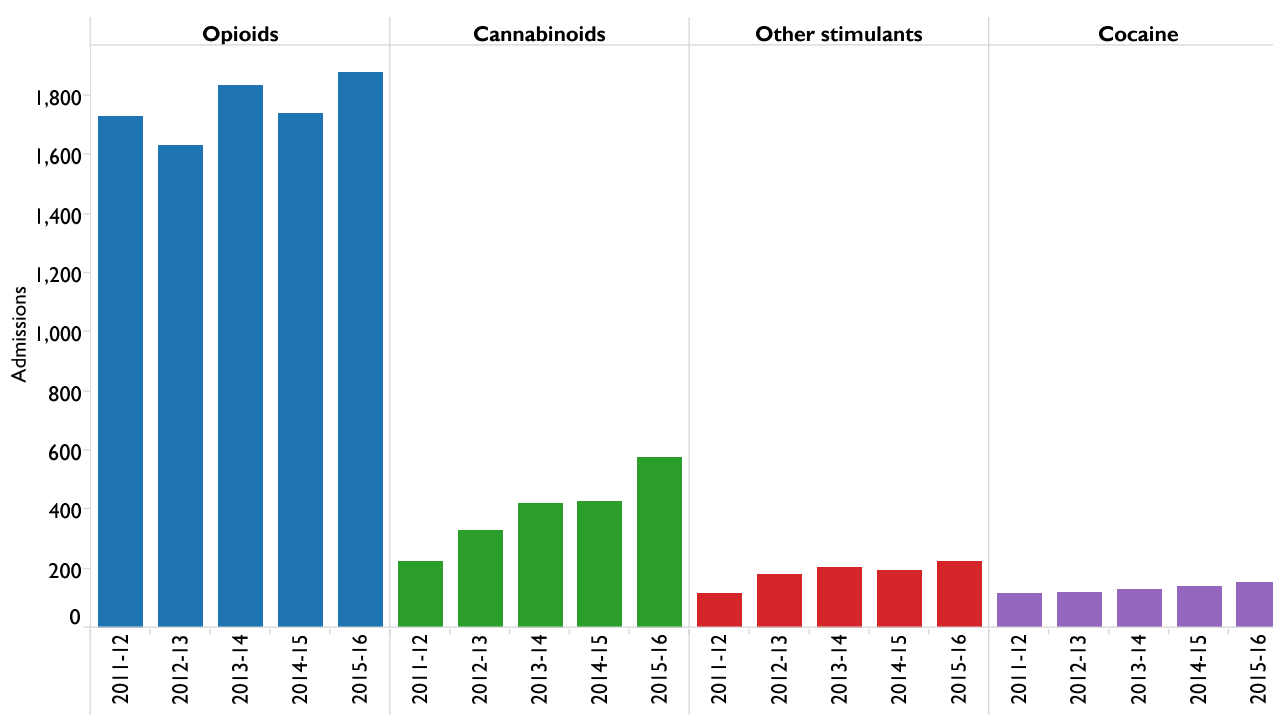
shows the number of working aged individuals resident in Wales and admitted to hospital following use of illicit drugs in 2015-16.



Source: Substance Misuse Programme / NHS Wales Informatics Service, 2016

**Chart 28: Working age people aged 25-49 resident in Wales admitted to hospital with a condition related to illicit drugs, by gender, age and primary substance used, 2015-16. Where an individual was admitted more than once, the diagnostic position of the first admission was used. Where more than one substance was recorded, they were assigned in the order opioid-cocaine-other stimulants – cannabinoids – other.**

Chart 29 shows the number of illicit drug related admissions by substance over the past five years for those aged 25-49. A total of 1,877 admissions in 2015-16 for this age cohort involved an opioid. This was an increase of 7.8 per cent on the previous year, although no clear pattern is observable across the most recent five years. Whilst, compared to the younger cohort, the number of admissions related primarily to cannabinoids remains substantially fewer for those aged 25-49 at 579 in 2015-16, there have been notable year on year rises for admissions relating to this class of substances, with a 2.5 fold increase since 2011-12. Whilst the number of admissions in which cocaine/crack and other stimulants were recorded as the primary drug involved was substantially lower than for either opioids or cannabinoids, these substances have also shown rises in most years since 2012-12, to 150 and 222 respectively.



Source: Substance Misuse Programme / NHS Wales Informatics Service, 2016

**Chart 29: Admissions to hospital involving working age people 25-49, resident in Wales with a condition related to illicit drugs, year and primary substance used. Where more than one substance was recorded, they were assigned in the order opioid-cocaine-other stimulants – cannabinoids – other**

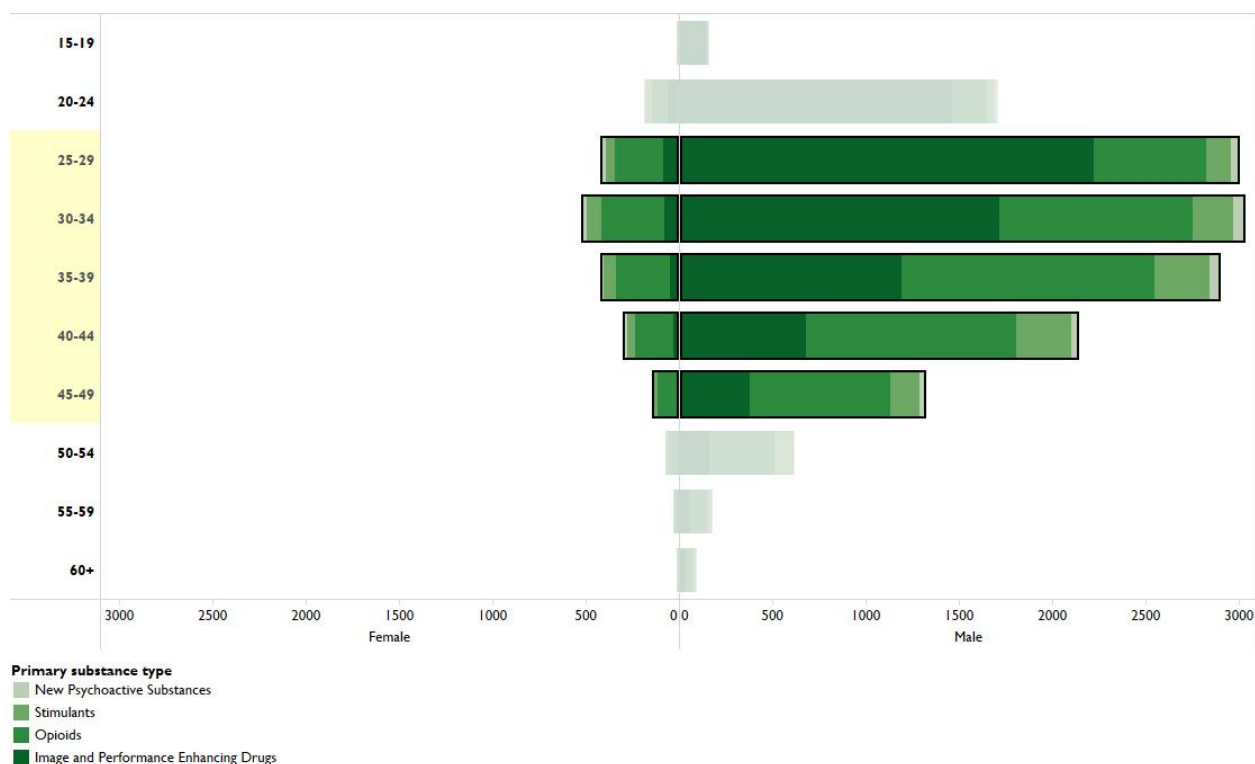
### 7.3 Individuals accessing Needle and Syringe Programmes, working age adults (25-49 years)

As described in Section 5.2.4, the Harm Reduction Database (HRD) captures data on the provision of clean injecting equipment through statutory, voluntary and pharmacy services across Wales. Individuals aged between 25 and 49 made up the majority of those regularly accessing Needle and Syringe Programmes (NSPs) in Wales, with a total of 14,096 (82.1 per cent) individuals. Of this total, 12,343 (87.6 per cent) were male. This figure suggests that 14.8 individuals per 1,000 Welsh residents aged 25-49 regularly accessed an NSP in 2015-16.

As with those aged up to 25, image and performance enhancing drugs were most frequently cited as the primary substance of use (6,442 individuals, 45.7 per cent of all individuals in this age range), but those reporting primary use of opioids (6,055, 43 per cent) and stimulants (1,365, 9.7 per cent) represented a substantially greater proportion of service users in this age range. A total of 234 individuals (1.7 per cent) reported primary use of new psychoactive substances.



There was a 2 per cent increase in the number of NSP users in this age range between 2014-15 and 2015-16. There was negligible change in the proportion reporting primary use of each substance type. Chart 30 shows the number of individuals between 25 and 49 accessing NSP services in Wales in 2015-16 by gender and primary substance of use.

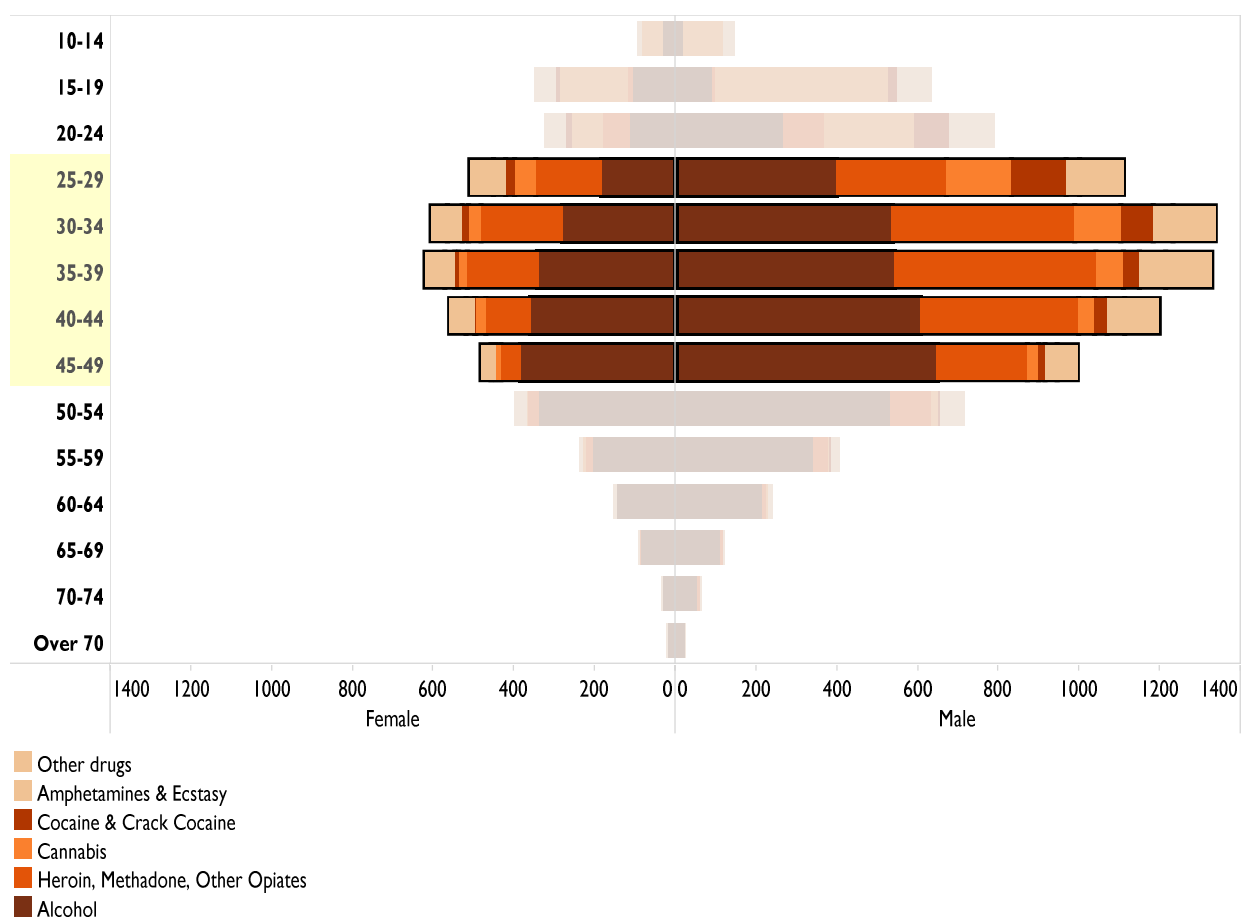


Source: Harm Reduction Database, 2016

**Chart 30: Number of working age people, 25-49, regularly accessing NSP services by gender, age band and primary substance of use, Wales, 2015-16**

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

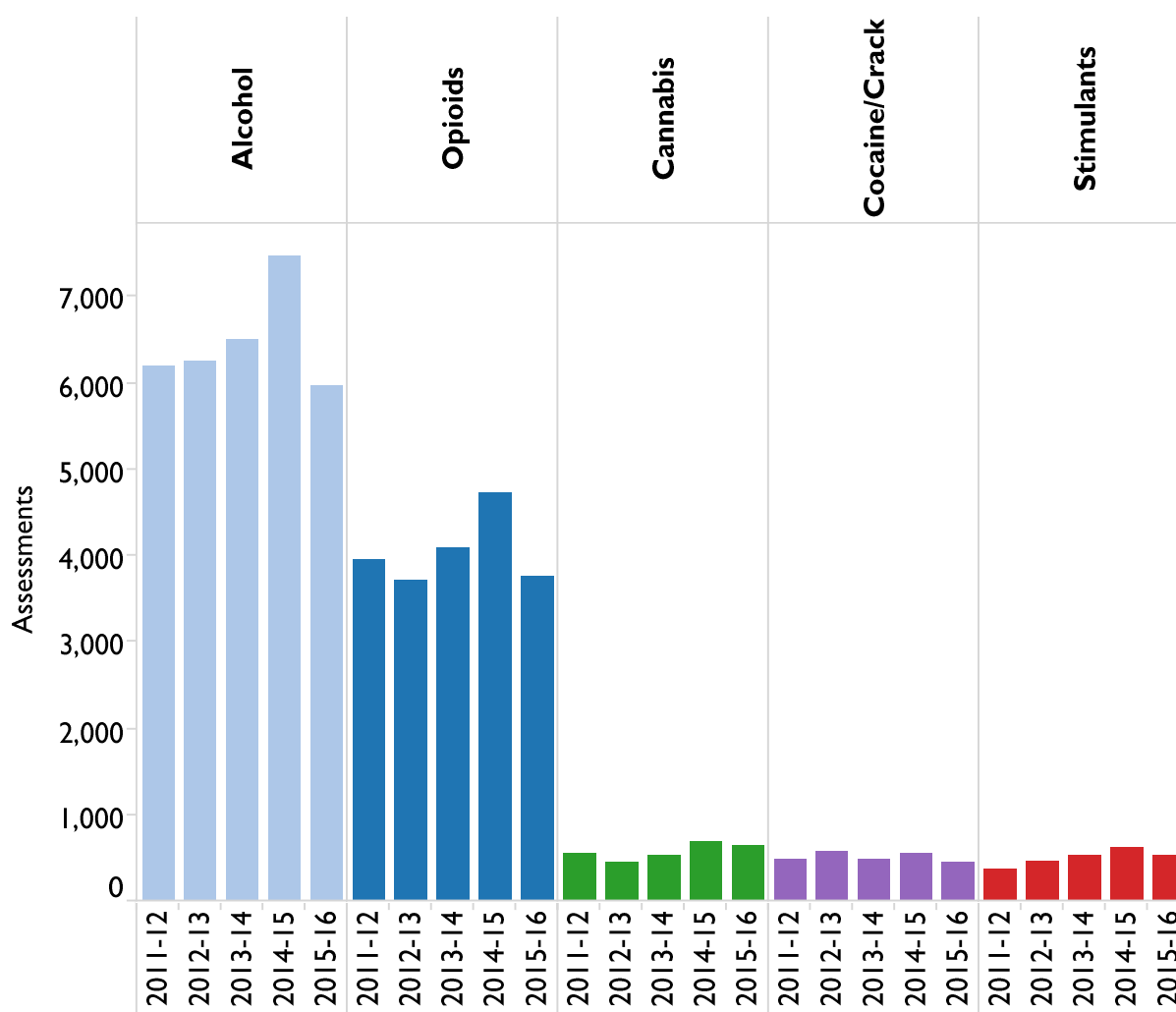
There were 12,144 assessments of individuals aged 25-49 in 2015-16, a reduction of 17.3 per cent from 2014-15. The assessments involved 8,765 individuals, representing 65.3 per cent of all individuals assessed in 2015-16. 31.7 per cent were women. The 30-34 and 35-39 age bands contained the most individuals across all age bands, with 1,974 and 1,980 individuals respectively. Chart 31 shows individuals assessed by substance misuse services in Wales in 2015-16 by age, gender and primary substance type.



Source: Welsh National Database for Substance Misuse, 2016

**Chart 31: Working aged people 25-49 assessed by substance misuse services in Wales, by gender, age band and primary substance reported as problematic, 2015-16. Where an individual was assessed more than once, details were taken from the first assessment**

Chart 32 shows the number of assessments carried out with those aged 25-49 in Wales by year and primary substance type.



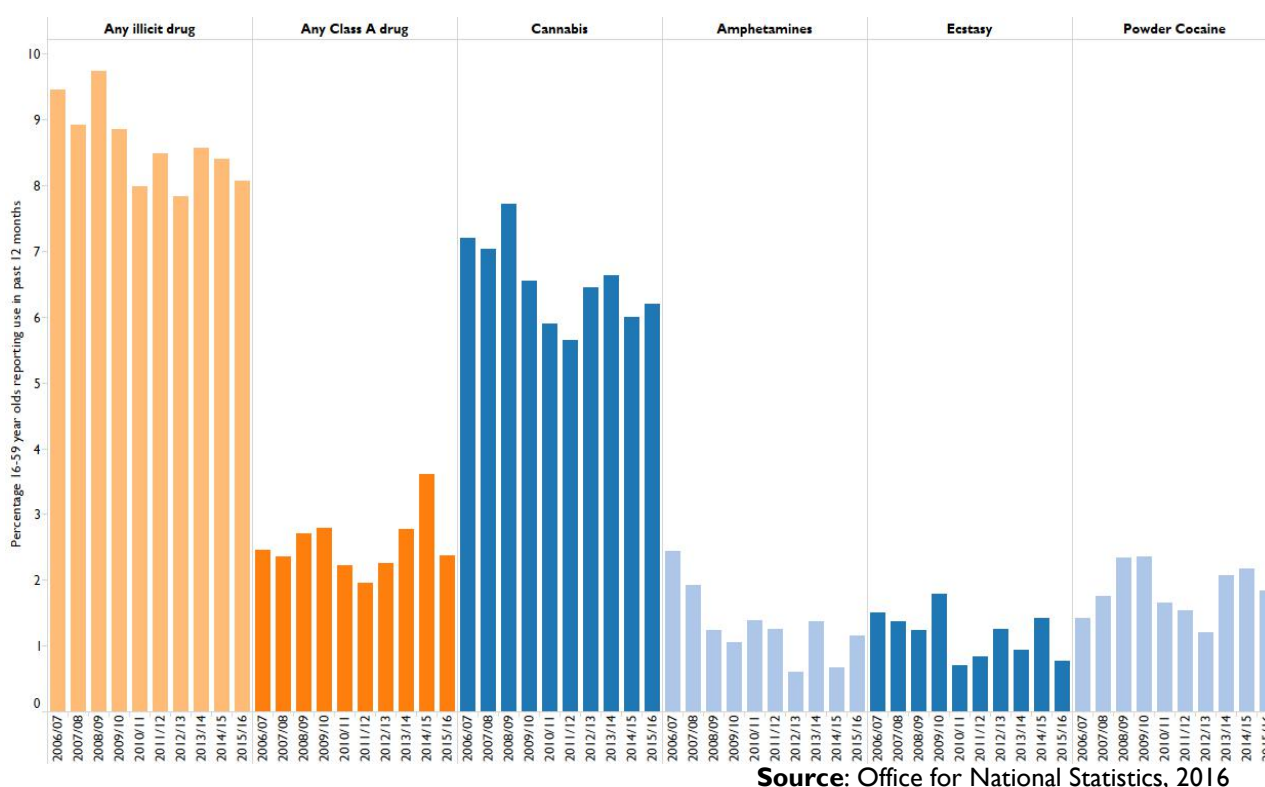
Source: Welsh National Database for Substance Misuse, 2016

**Chart 32: Substance misuse assessments carried with working aged people 25-49, by year and primary substance reported as problematic, Wales**

Alcohol was the most frequently reported presenting substance reported at assessment by this age group, with 5,969 assessments. This represents a reduction of 20.1 per cent compared with 2014-15. The proportionate drop in assessments at which opioids were reported as the main problematic substance was comparable, at 20.2 per cent, with 3,763 assessments carried out in 2015-16. Substantial declines were also seen in assessments at which crack/cocaine was reported as the primary substance (20.4 per cent) and other stimulants (15.3 per cent), although these falls were in the context of considerably fewer assessments, with 440 and 526 respectively. The number of assessments at which cannabis was recorded as the primary substance remained relatively steady, with a fall of 6.2 per cent year on year to 634.

## 7.5 Self-reported use of illicit drugs in the past year and attitudes towards drugs and alcohol: adults aged 16-59 years

The Crime Survey for England and Wales (CSEW) is carried out annually. Whilst its principal purpose is to survey a representative sample of the population on their experiences of crime, it also includes a number of questions relating to individuals' own use of, and attitudes towards, illicit drugs. Chart 33 shows the percentage of adults in Wales reporting use of selected illicit substances.



**Chart 33: Percentage of adults in Wales aged 16-59 reporting use in past 12 months of selected illicit drugs, Crime Survey for England and Wales 2015-16**

Data from the CSEW for 2015-16 suggests that, following rises between 2013-14 and 2014-15, use of any Class A drug is reported by substantially fewer adults in Wales in 2015-16 (2.4 per cent) compared with the previous year (3.6 per cent). Falls are seen for specific Class A drugs for which responses are requested, with reported cocaine use falling by 0.4 percentage points to 1.8 per cent and ecstasy use by 0.6 percentage points to 0.8 per cent. However, a rise in the use of amphetamines (typically Class B) by 0.5 percentage points to 1.2, coupled with the observation that over recent years reported amphetamine use tends to show the inverse pattern to reported Class A stimulant use may indicate that some substitution is taking place.

Across all illicit drugs the proportion of adults reporting use has fallen year on year for the past two years and, at 8.1 per cent, is lower by 1.4 percentage points than for 2006-

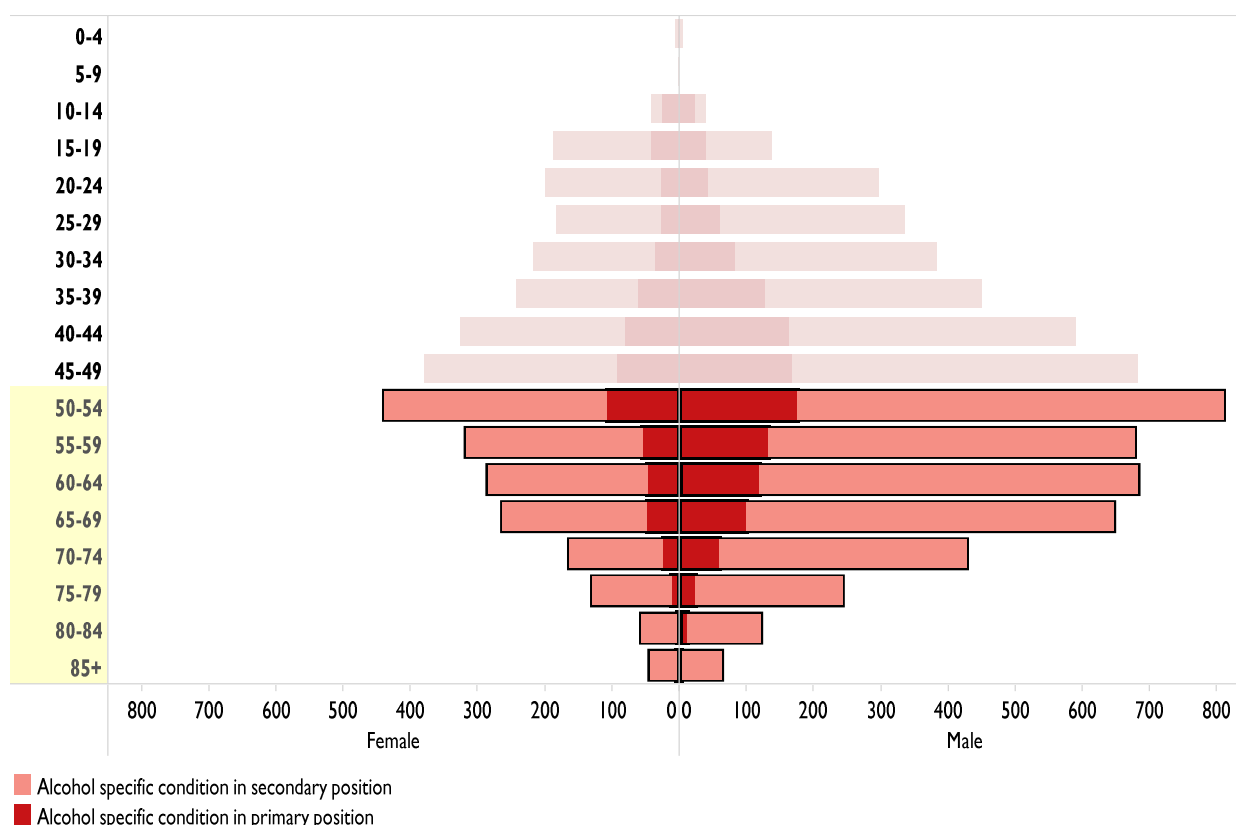
07. However, there has been considerable variation between years, with clear trends difficult to discern. Reported cannabis use rose by 0.2 percentage points to 6.2 per cent.

Across most drugs and drug categories, respondents living in Wales reported lower rate of use than England. The difference for any illicit drug use was 0.3 percentage points, widening to 0.6 percentage points for any Class A drug. Reported cannabis use remained lower in Wales than in England, although the gap, at 0.3 percentage points, was reduced compared with that seen in 2014-15. A notable exception to this pattern was amphetamines, with Wales reporting double the 0.6 per cent rate of use in England in 2015-16.

## 8. Older adults (aged 50 years and above)

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

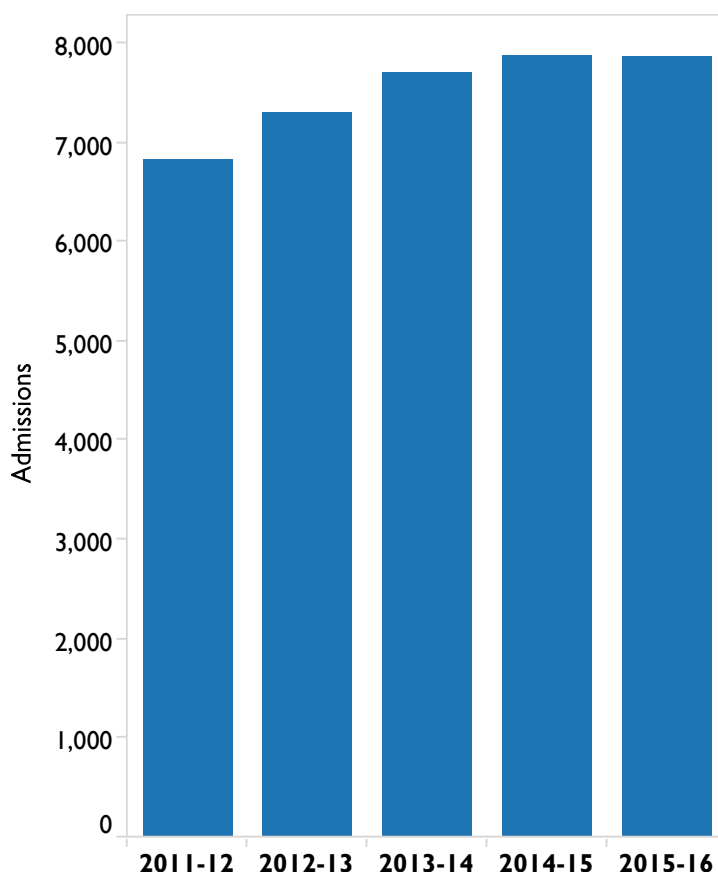
There were 7,852 admissions in 2015-16 where the patient was 50 or older, with 5,387 individuals admitted. These figures were almost identical to the previous year, with 34 more admissions and one more patient in the current year compared with 2014-15. The proportion of males admitted in this age cohort was 65.5 per cent, comparable to previous years. The 50 and over age cohort made up 54.3 per cent of all those admitted in 2015-16. This was similar to the 57.3 per cent recorded in 2014-15; however, it is considerably higher than in 2011-12, when this age cohort made up 44.6 per cent of all those admitted with an alcohol specific condition. The five-year age band with the greatest number of individuals admitted falls within this cohort, with those aged 50-54 making up 12.6 per cent, or approximately one in eight of all admissions in 2015-16. Chart 34 shows the number of individuals aged 50+ admitted to hospital with an alcohol specific condition any diagnostic position in 2015-16 by gender, age and diagnostic position.



Source: Substance Misuse Programme / NHS Wales Informatics Service, 2016

**Chart 34: Older people aged 50+ resident in Wales admitted to hospital with an alcohol specific condition, by gender, age and diagnostic position of alcohol related condition, 2015-16. Where an individual was admitted more than once, the first admission was included**

Chart 35 shows the number of admissions involving those of working age including an alcohol specific condition. As noted above, admissions in this age cohort were almost identical in 2015-16 compared with the previous year. The data for the most recent five years suggests a plateau of admission amongst those aged 50+ following a period of rises, with admissions 14.8 per cent higher than in 2011-12.



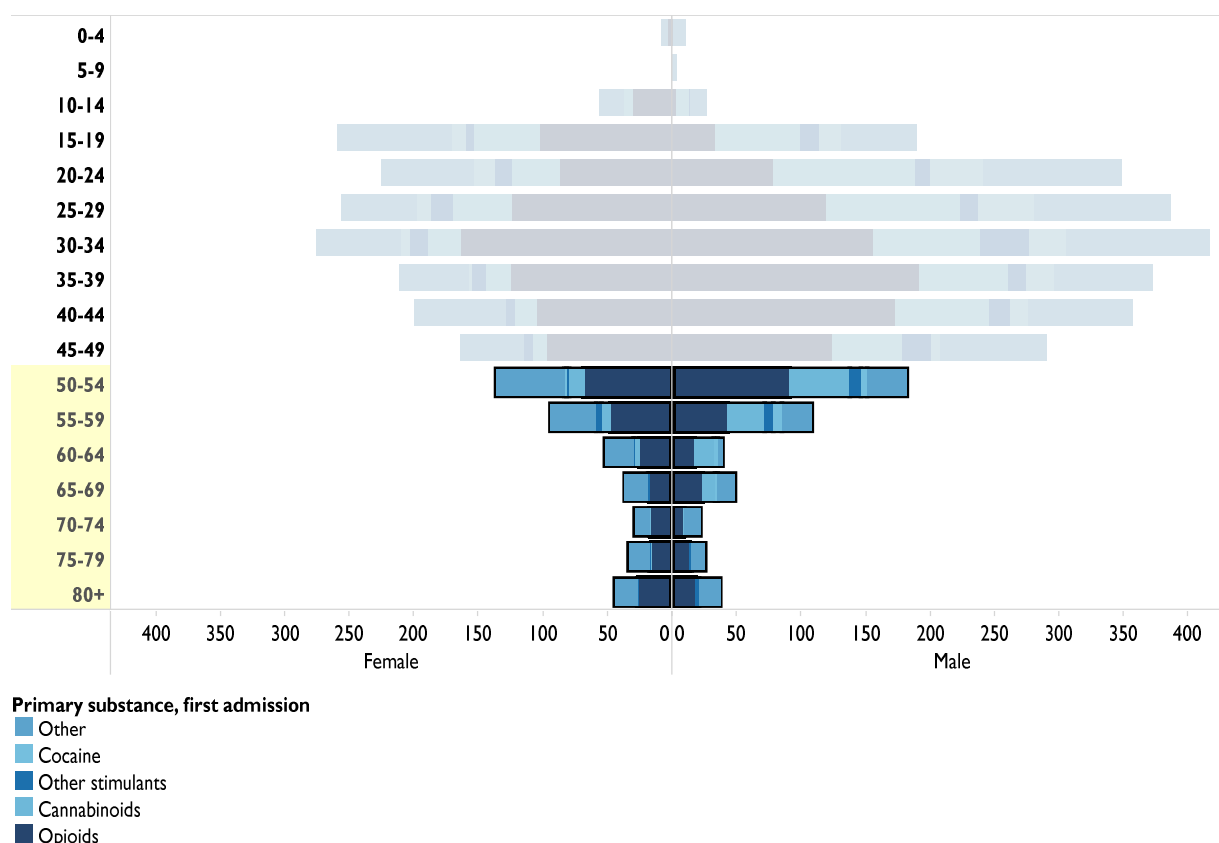
Source: Substance Misuse Programme / NHS Wales Informatics Service, 2016

**Chart 35: Admissions involving older people aged 50+ resident in Wales with an alcohol specific condition, by year**

## 8.2 Hospital admissions for poisoning with illicit drugs in older adults (50+ years)

There were 1,056 illicit drugs related admissions involving individuals 50 years or older, a rise of 4.8 per cent on 2014-15. These admissions related to 889 individuals, a rise of 7 per cent on the 831 seen in the previous year, 50.3 per cent of whom were male. Individuals aged 50 and over made up 18.3 per cent of those admitted in 2015-16 following illicit drug use, a marginal decrease of 0.4 per cent from 2014-15. Within this broad age cohort, the 50-54 age category reported the largest number of individuals, with 6.6 per cent of all individuals admitted across all age categories. Less than 2 per cent of all admissions were recorded in any other five year age band in this age cohort. Chart 36

shows the number of older individuals resident in Wales and admitted to hospital following use of illicit drugs in 2015-16.

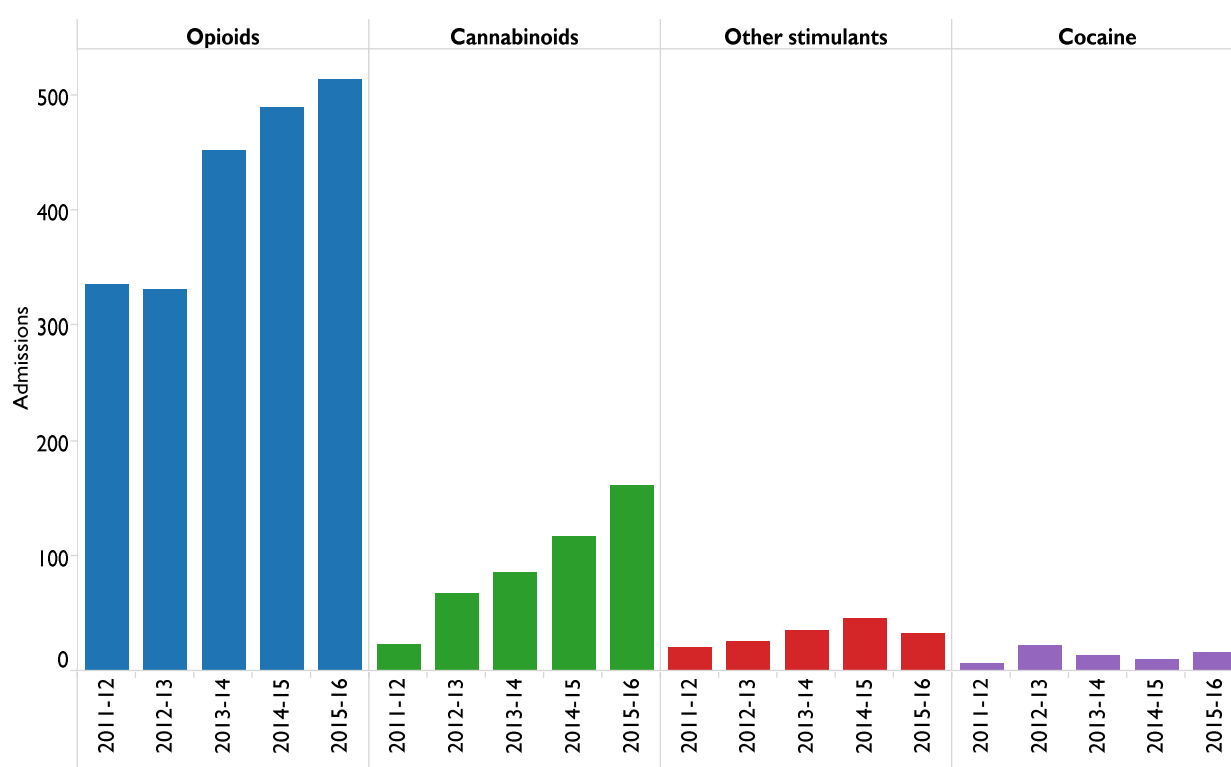


**Source:** Substance Misuse Programme / NHS Wales Informatics Service, 2016

**Chart 36: Older people aged 50+ resident in Wales admitted to hospital with a condition related to illicit drugs, by gender, age and primary substance used, 2015-16. Where an individual was admitted more than once, the substance at first admission was used. Where more than one substance was recorded, they were assigned in the order opioid-cocaine-other stimulants – cannabinoids – other.**

**Chart 37** shows the number of illicit drugs related admissions by substance over the past five years for those aged 50+. Opioids were the drug most frequently reported with 514 admissions. This represented a rise of 4.9 per cent on 2014-15 and a continuation of the trend observed since 2012-13; compared with 2012-13, opioid related admissions have risen 54.8 per cent. There were considerably fewer admissions involving other illicit drugs within this age category; however, the rise in cannabinoid related admissions is notable, increasing 27.3 per cent since 2014-15 and sevenfold over five years to 161 admissions in 2015-16. For other stimulants there was a fall of 13 admissions to 32 admissions in 2015-16; cocaine related admissions saw a rise of 6 to 16.





Source: Substance Misuse Programme / NHS Wales Informatics Service, 2016

**Chart 37: Admissions to hospital involving older people aged 50+ resident in Wales with a condition related to illicit drugs, year and primary substance used. Where more than one substance was recorded, they were assigned in the order opioid-cocaine-other stimulants – cannabinoids – other**

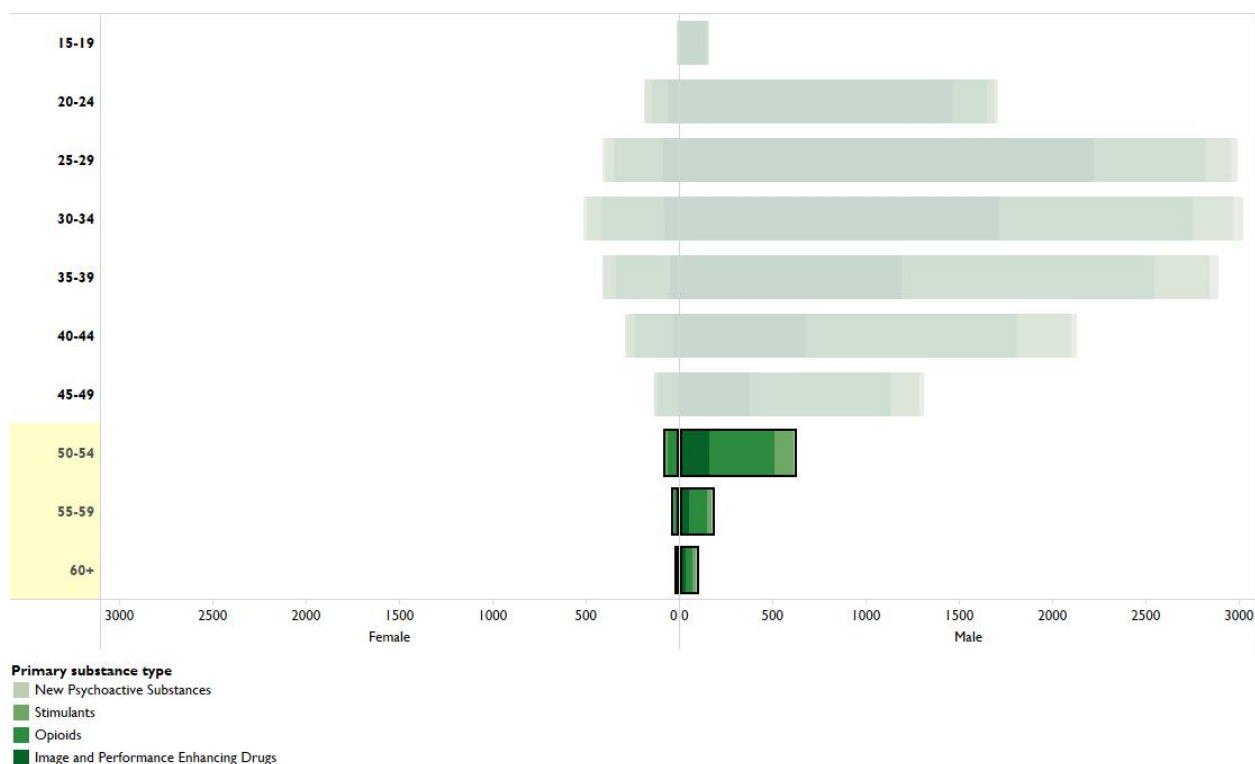
### 8.3 Individuals accessing Needle and Syringe Programmes, older adults (50+ years)

A total of 995 individuals were identified as regularly using Needle and Syringe Programmes (NSPs) in Wales in 2015-16 (see Section 5.2.4 for definitions and details on collection of this data). As for other age ranges, the majority of these individuals (885, 88.9 per cent) were male. These figures suggest that, for every 1,000 Welsh residents aged 50 and over, 0.8 accessed an NSP in 2015-16.

In contrast to other age groups, opioids were most frequently reported as the primary substance of use, with 561 individuals (56.4 per cent) primary opioid users in this age range. Image and performance enhancing drugs were reported as the primary substance of use by 265 individuals aged 50 or over (26.6 per cent) followed by stimulants (157 individuals, 15.8 per cent) and new psychoactive substances (12 individuals, 1.2 per cent).

The number of individuals aged 50 and over recorded as accessing NSPs in Wales in 2015-16 increased by 22.1 per cent compared with 2014-15. The proportions of those using different types of substance remained stable over this period. Chart 38 shows the number

of individuals aged 50 and over accessing NSP services in Wales in 2015-16 by gender and primary substance of use.

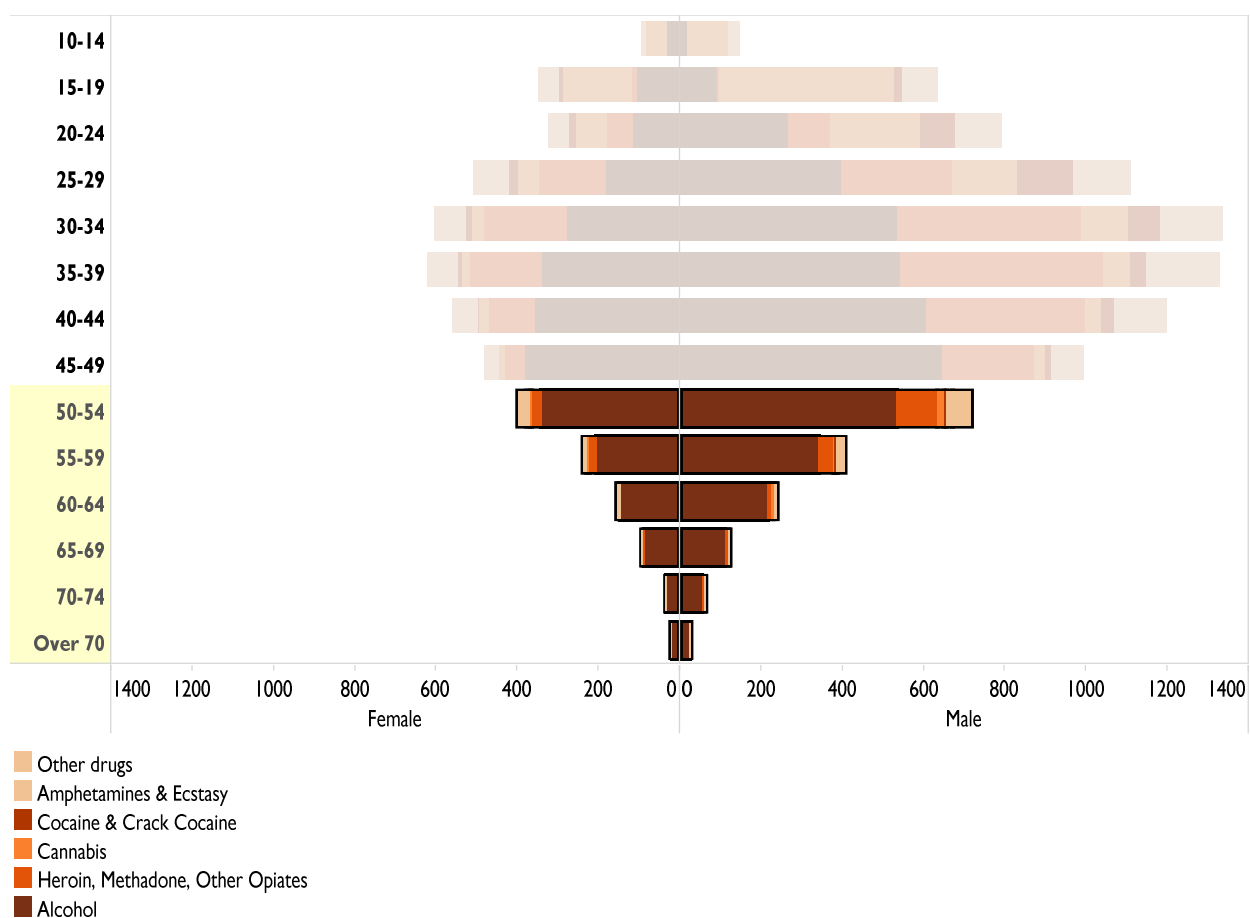


Source: Harm Reduction Database, 2016

**Chart 38: Number of older people aged 50 and over, regularly accessing NSP services by gender, age band and primary substance of use, Wales, 2015-16**

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

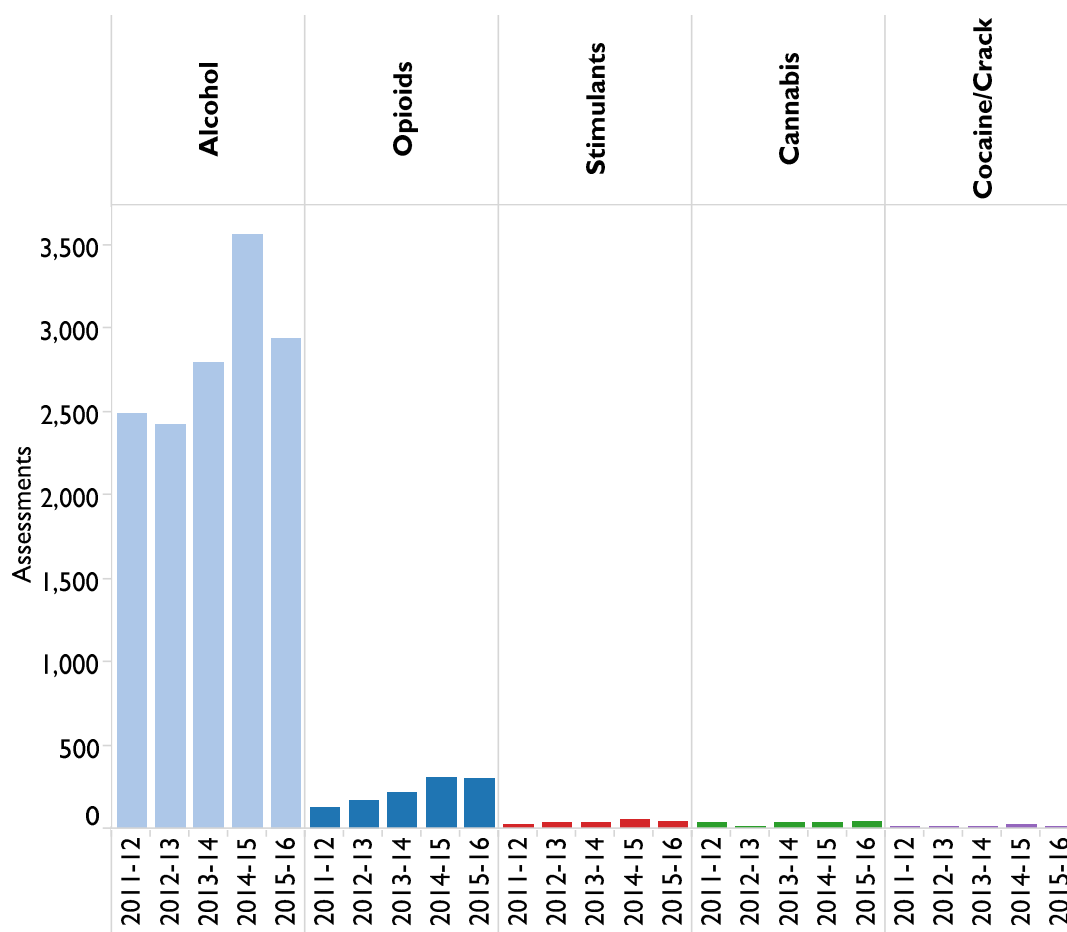
There were 3,515 assessments of individuals aged 50 and over recorded on the Welsh National Database for Substance Misuse in 2015-16, involving 1,587 men and 943 women. This was an overall fall of 3.6 per cent on 2014-15. In addition, a comparable proportion of overall assessments with 18.8 per cent in 2015-16 compared with 18.4 per cent in 2014-15. A substantial majority of those assessed within this age cohort, 70.8 per cent, were aged between 50 and 59. Chart 39 shows individuals aged 50 and over assessed by substance misuse services in Wales by age, gender and main problematic substance reported.



Source: Welsh National Database for Substance Misuse, 2016

**Chart 39: Older people 50+ assessed by substance misuse services in Wales, by gender, age band and primary substance reported as problematic, 2015-16. Where an individual was assessed more than once, details were taken from the first assessment**

Chart 40 shows the number of assessments carried out with those aged 50 or over in Wales in 2015-16 by year and main substance reported as problematic. Alcohol was the most frequently cited problematic substance by a considerable margin, with 2,940 assessments. This compares with 290 assessments where opioids were reported as the main substance of use, 43 assessments reporting stimulants, 41 reporting cannabis and 12 reporting cocaine or crack. However, assessments with alcohol reported as the primary substance did decline by 17.4 per cent compared with 2014-15.



Source: Welsh National Database for Substance Misuse, 2016

**Chart 40: Substance misuse assessments carried with working aged people 25-49, by year and primary substance reported as problematic, Wales**

## **9. Injecting drug use: risk behaviours and blood borne viruses**

### **9.1 Risk behaviours amongst young people who inject drugs**

Injecting drug use, in particular where rates 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), has a clear impact on the prevalence of blood borne viral infections, including hepatitis B, hepatitis C and HIV.

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 England<sup>16</sup>. In addition to requesting that participants complete an anonymous survey on risk behaviours, the UAM carries out a dry blood spot test for hepatitis and HIV.

#### **9.1.1 Direct and indirect sharing**

The UAM recorded 23 of 183 (13 per cent) participants in Wales as directly sharing injecting equipment in 2015, a decrease of 9 percentage points on the previous year. However, when indirect sharing is included, the proportion reporting any sharing rose to 42 per cent, an increase of 1 percentage point on 2014. For England, the proportions were 17 per cent reporting direct sharing and 38 per cent reporting any sharing; both these figures have been stable over the most recent five years.

#### **9.1.2 Prevalence of BBVs amongst people who inject drugs in Wales and uptake of hepatitis B vaccination**

A total of 28 of 261 respondents in Wales provided dry blood spots which tested positive for hepatitis B, a rate of 11 per cent. This proportion has been relatively stable since blood testing was first carried out as part of the UAM in 2011. The uptake of hepatitis B vaccination amongst UAM participants in Wales was reported as 74 per cent; again, this proportion has been very stable over the most recent five years.

At 53 per cent, the proportion of those tested who were positive for hepatitis C was substantially higher, and has been rising year on year since 2012, when the rate was 33 per cent. The proportion of participants who reported that they were aware of their hepatitis C infection has varied considerably over the period for which the UAM has been undertaken, although the figure for 2015, at 47 per cent, was only 1 percentage point lower than that reported in 2014. For England, the prevalence of hepatitis B was down 1 percentage point in 2015 at 14 per cent, whilst samples from 52 per cent of participants were positive for hepatitis C, a fall of 2 percentage points.

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<sup>16</sup> Further information and data from the Unlinked Anonymous Monitoring Survey is available at: <https://www.gov.uk/government/statistics/people-who-inject-drugs-hiv-and-viral-hepatitismonitoring#history>

### **9.1.3 Prevalence of HIV infection amongst people who inject drugs**

The rate of HIV infection was 0.8 per cent amongst those from Wales participating in the UAM in 2015, down from the previous year of 1.1 per cent but numbers are very low. In total there have been eight positive HIV tests recorded through the UAM since dry blood spot testing was introduced in 2011. For 2015, the rate in England was 1 per cent, no change from the previous year.

In addition to data from the UAM, Public Health England reports the number of new diagnoses of HIV in the UK and constituent countries on an annual basis, along with the probable reason for exposure to the virus where known. In 2014 there were 186 new cases of HIV amongst Welsh residents and in 2015 a total of 168 new cases. However, fewer than ten of these new infections each year were believed to be as a result of injecting drug use<sup>17</sup>.

### **9.1.4 Injecting site infection**

Symptoms of injecting site infection reported by UAM participants in Wales rose for the fourth year to 40 per cent, an increase of 1 percentage point on the 2014-15. The reported level of infection symptoms amongst participants in England was substantially lower at 32 per cent.

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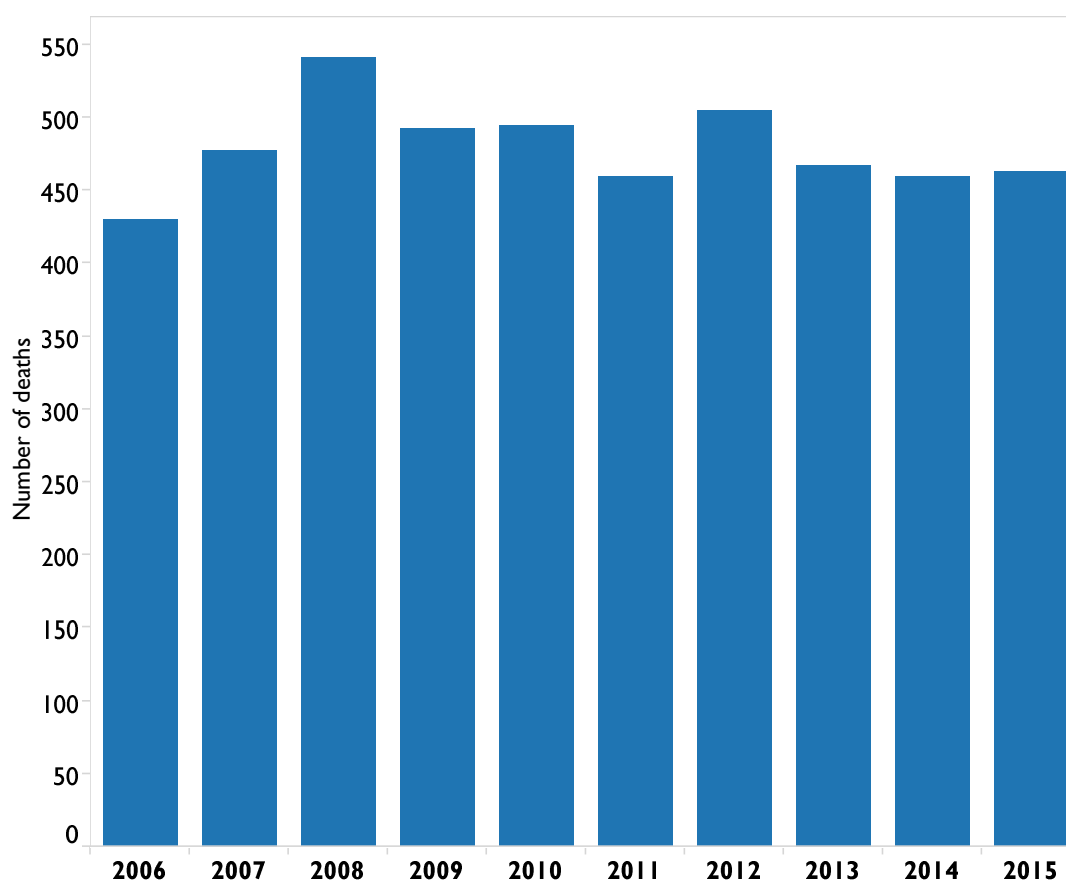
<sup>17</sup> Public Health England (2015) HIV surveillance data in the UK by demographic characteristics and geographical region <https://www.gov.uk/government/statistics/hiv-annual-data-tables>

## 10. Alcohol related deaths

### 10.1 Alcohol related deaths over time

As described in Appendix 2, there are two methods of calculating alcohol related deaths, one used by the Office for National Statistics (ONS) and the other using Alcohol Attributable Fractions (AAF). This subsection of alcohol related deaths describes deaths by year as counted by the ONS method. This allows for comparison with reports in previous years and with figures from other UK countries. Subsequent subsections will present more detailed figures produced by the Public Health Wales Observatory using the AAF method.

Using the ONS definition, in 2015 there were 463 alcohol specific deaths registered in Wales in 2015, four more deaths than in 2014, an increase of 0.8 per cent. There were 286 deaths of men registered in 2015 (61.8 per cent of deaths) and 177 deaths of women (38.2 per cent). The number of alcohol specific deaths registered annually in Wales has been in the range 459 to 467 for four of the past five years. Chart 41 shows the number of alcohol specific deaths registered in Wales in each of the past ten years using the ONS method.



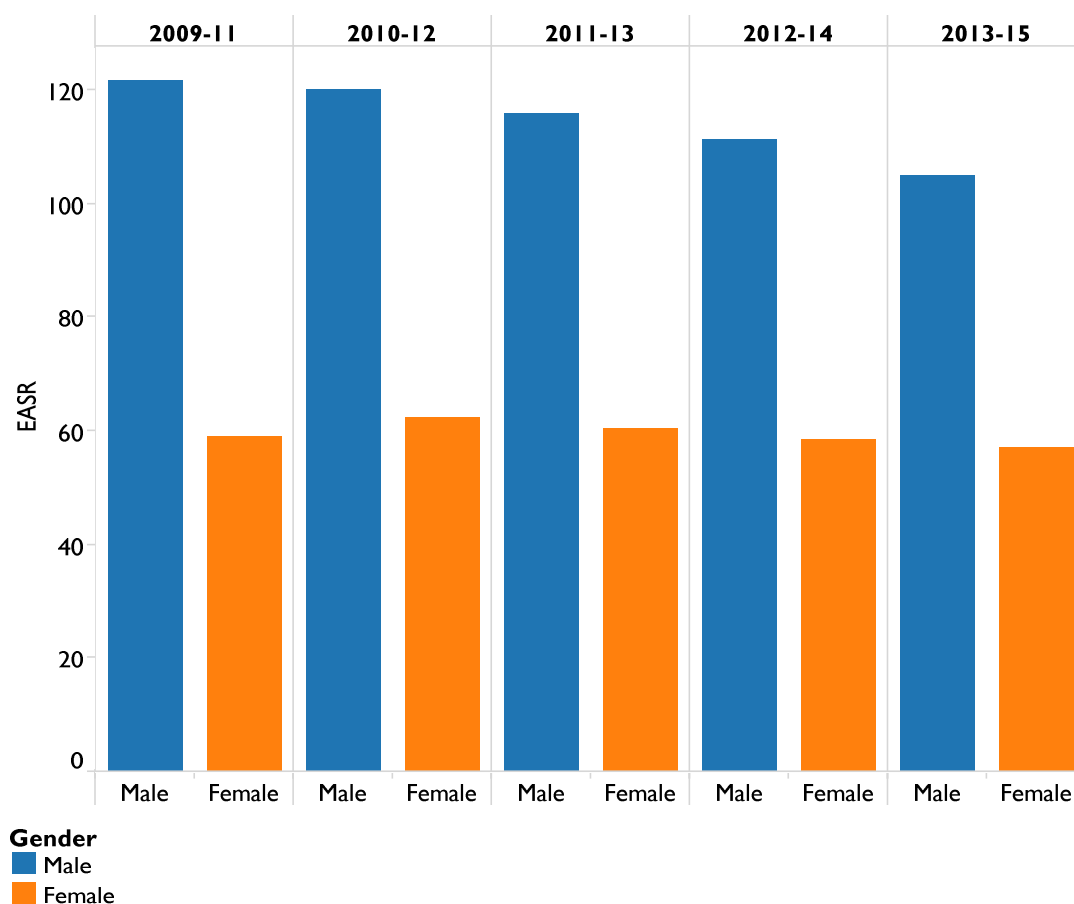
Source: Office for National Statistics, 2016

**Chart 41: Number of alcohol specific deaths registered in year, ONS method, Wales, by year**

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

As described above, this subsection of alcohol related deaths presents figures calculated using the AAF method of counting alcohol related deaths. Further details are available in Appendix 2.

The rolling average of deaths from alcohol specific causes over the most recent five years suggests that the number of deaths across Wales has fallen slightly year on year from 391.4 in 2012-13 to 365.7 in 2015-16. However, reductions in deaths have been more marked amongst men over this period than amongst women. Whilst the overall European Age Standardised Rate for alcohol specific mortality fell from 13 per 100,000 population in 2009-11 to 12 per 100,000 population in 2013-15, the rate for men fell from 17.6 to 16 per 100,000 population while for women the reduction was from 8.6 to 8.2 per 100,000 population. These figures are shown in Chart 42.

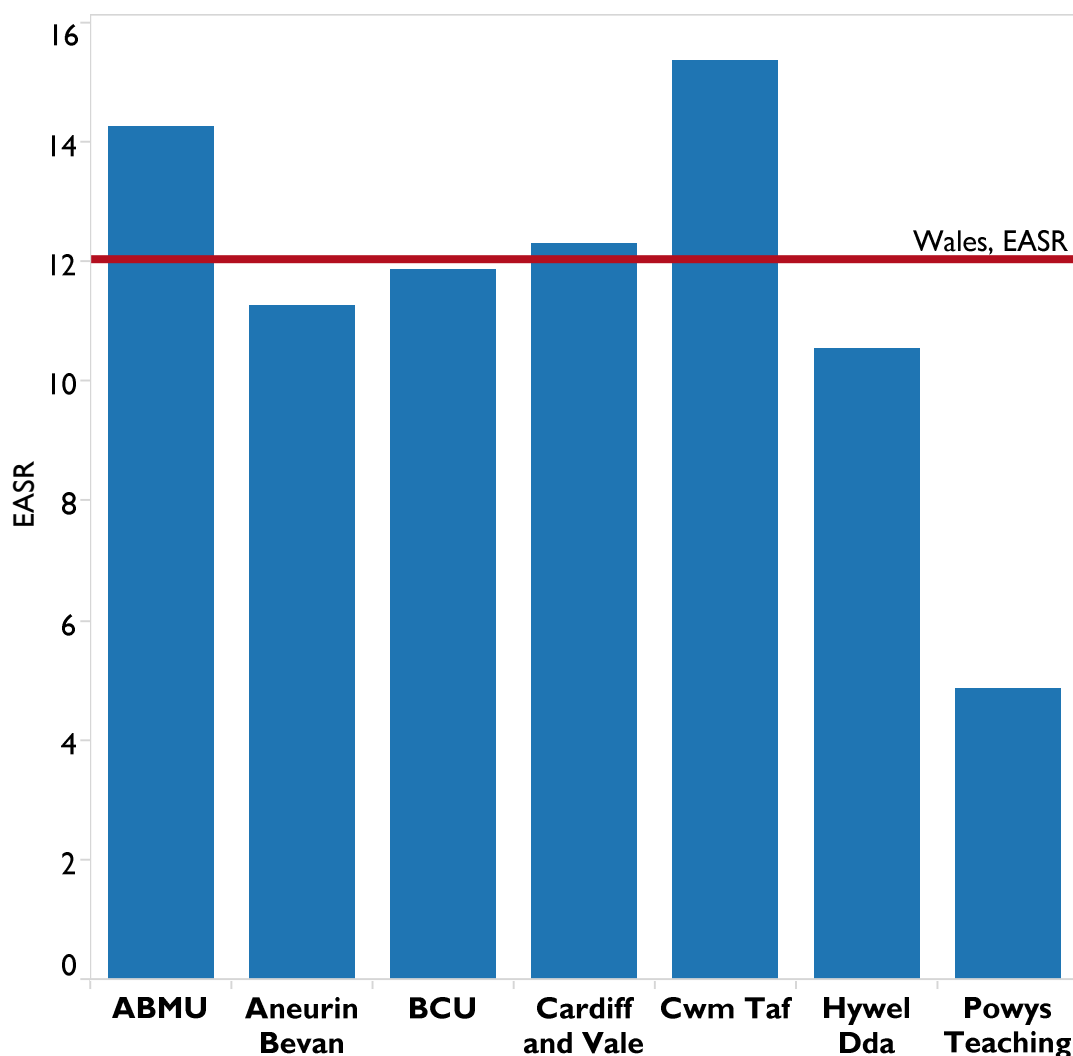


Source: Public Health Wales Observatory, 2016

**Chart 42: European Age Standardised Rate of alcohol specific deaths registered in year, AAF method, Wales, three year rolling averages, by year and gender**



There was considerable geographic variation in three year rolling averages of alcohol specific mortality, as can be seen in Chart 43. Cwm Taf had the highest average rate, with 15.4 per 100,000 population. This was more than three times the rate in the Powys Teaching Health Board area, which, with an average of 4.8 alcohol specific deaths over 2013-15, had the lowest rate in Wales.



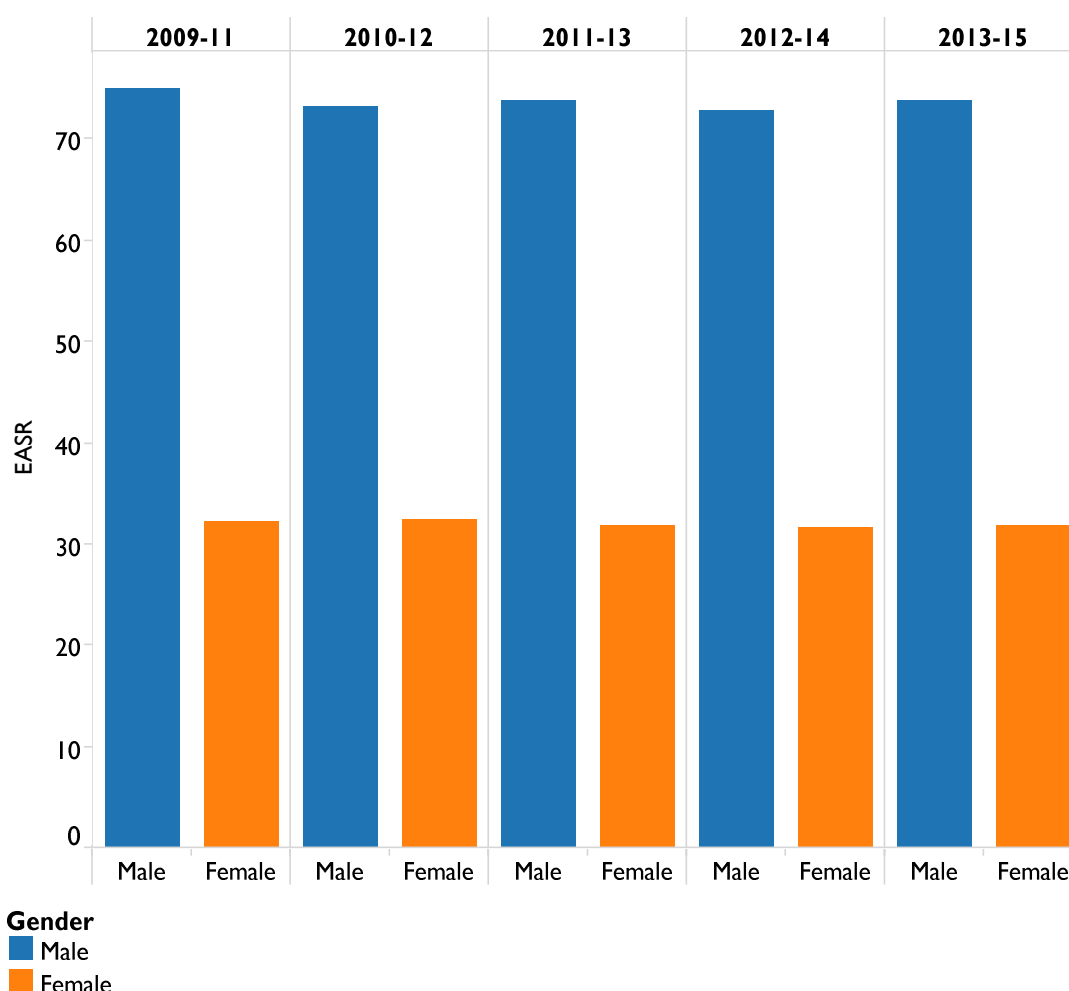
Source: Public Health Wales Observatory, 2016

**Chart 43: European Age Standardised Rate of alcohol specific deaths, AAF method, Wales, three year rolling averages, deaths registered in 2013-15, by Health Board**

### 10.3 Alcohol attributable mortality

As noted above, this subsection uses the AAF definition of alcohol related deaths. Alcohol attributable mortality in Wales shows less variation over the most recent five periods of three year rolling averages than alcohol specific mortality, with the European Age Standardised Rate across all persons falling slightly from 51.5 per 100,000 population over 2019-11 to 51 per 100,000 population in 2013-15. As with alcohol specific mortality, the

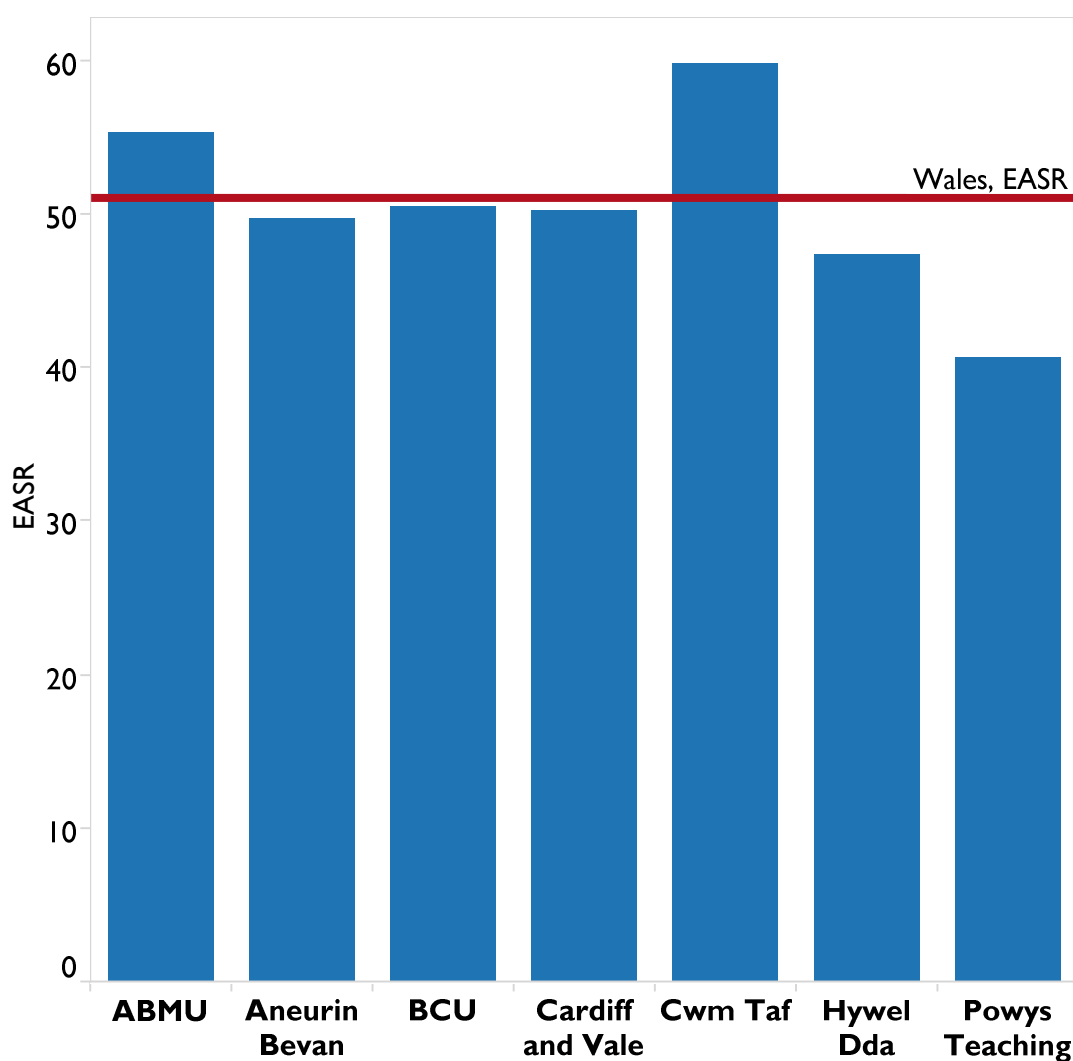
fall in the rate amongst men over this period was slightly greater than amongst women, with the male rate of alcohol attributable deaths declining from 75 per 100,000 population over 2009-11 to 73.9 over 2013-15 while the female rate was 32.2 per 100,000 population over 2009-11 and 31.9 over 2013-15. Chart 44 shows rates of alcohol attributable mortality by three year rolling average and gender.



Source: Public Health Wales Observatory, 2016

**Chart 44: European Age Standardised Rate of alcohol attributable deaths, AAF method, Wales, three year rolling averages, years in which death was registered, by year and gender**

Chart 45 shows alcohol attributable mortality by Health Board by three year rolling average of the five most recent periods. The pattern amongst Health Boards is similar to that for alcohol specific mortality described above, although the differences between boards are proportionately smaller. For the population of Wales the European Age Standardised Rate is 51 per 100,000 population. Cwm Taf was the Health Board with the highest EASR for alcohol attributable mortality at 59.8 per 100,000 population, Powys Teaching recorded the lowest average rate for 2013-15 with 40.7 per 100,000 population.



Source: Public Health Wales Observatory, 2016

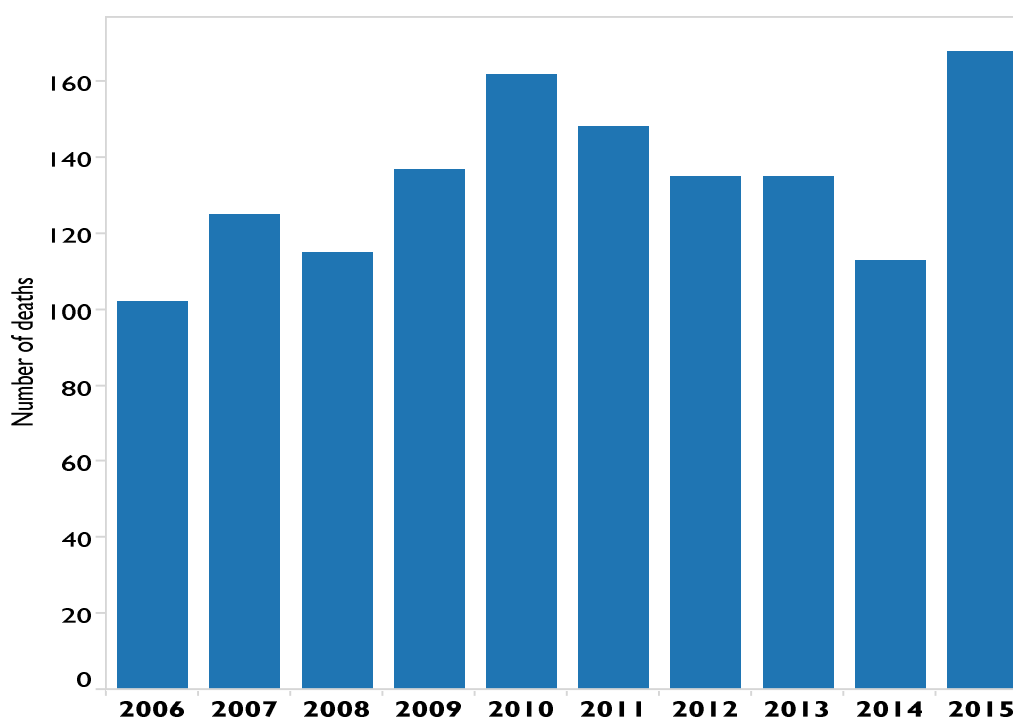
**Chart 45: European Age Standardised Rate of alcohol attributable deaths, AAF method, Wales, three year rolling averages, deaths registered in 2013-15, by Health Board**

## 11. 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. All figures in this section are for deaths registered in a given year.

### 11.1 Deaths by drug poisoning and drug misuse deaths by gender and age

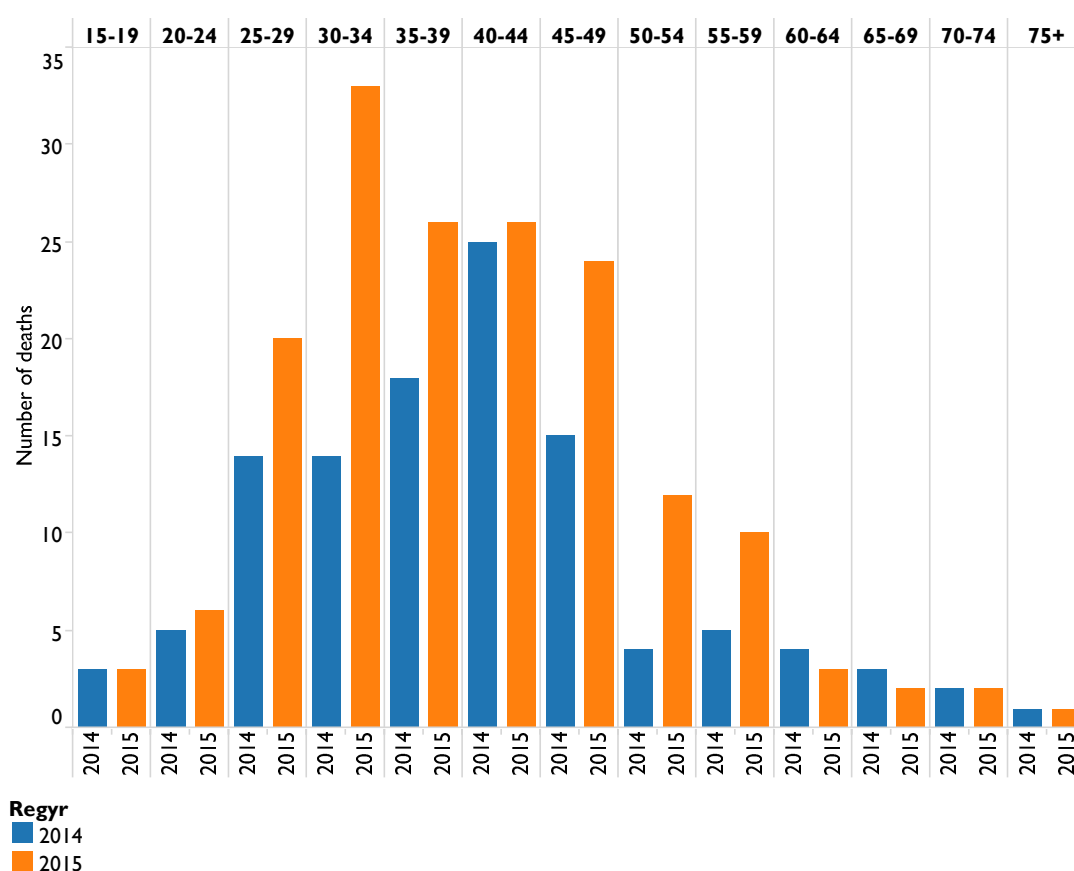
There were substantial rises in the number of deaths from both drug poisoning and drug misuse in Wales registered in 2015 compared with the previous year. Drug poisoning deaths rose by 41.7 per cent to 238, whilst drug misuse deaths rose from 113 in 2014 to 168 in 2015, an increase of 48.7 per cent. This reverses a five year trend of fewer drug misuse deaths recorded in every year between 2011 and 2014. A total of 133 men died from drug misuse in Wales in 2015, an increase of 64.2 per cent, while the 35 deaths involving women represented a rise of 9.4 per cent. Chart 46 shows the number of drug misuse deaths in Wales between 2006 and 2015.



Source: Office for National Statistics, 2016

**Chart 46: Number of deaths from drug misuse in Wales by year of registration, 2006-15**

As can be seen in Chart 47, there were substantial increases in the number of deaths across every age band from 20-24 to 55-59. The 50-54 age band with 12 drug misuse deaths in 2015 saw the largest proportional increase with three times the number of deaths registered in 2014. The 30-34 age band recorded the second greatest increase of 135.7 per cent to 33 deaths. The pattern of deaths across age bands was also notably different in 2015 compared with the previous year. In 2014 the number of deaths rose by age band to peak amongst those aged 40-44. In 2015 the peak age band was 30-34, with deaths in this age band accounting for 19.6 per cent of all deaths. More than half of all drug misuse deaths in Wales registered in 2015 (52.4 per cent) were of individuals aged under 40 compared with 47.8 per cent in the previous year.



Source: Office for National Statistics, 2016

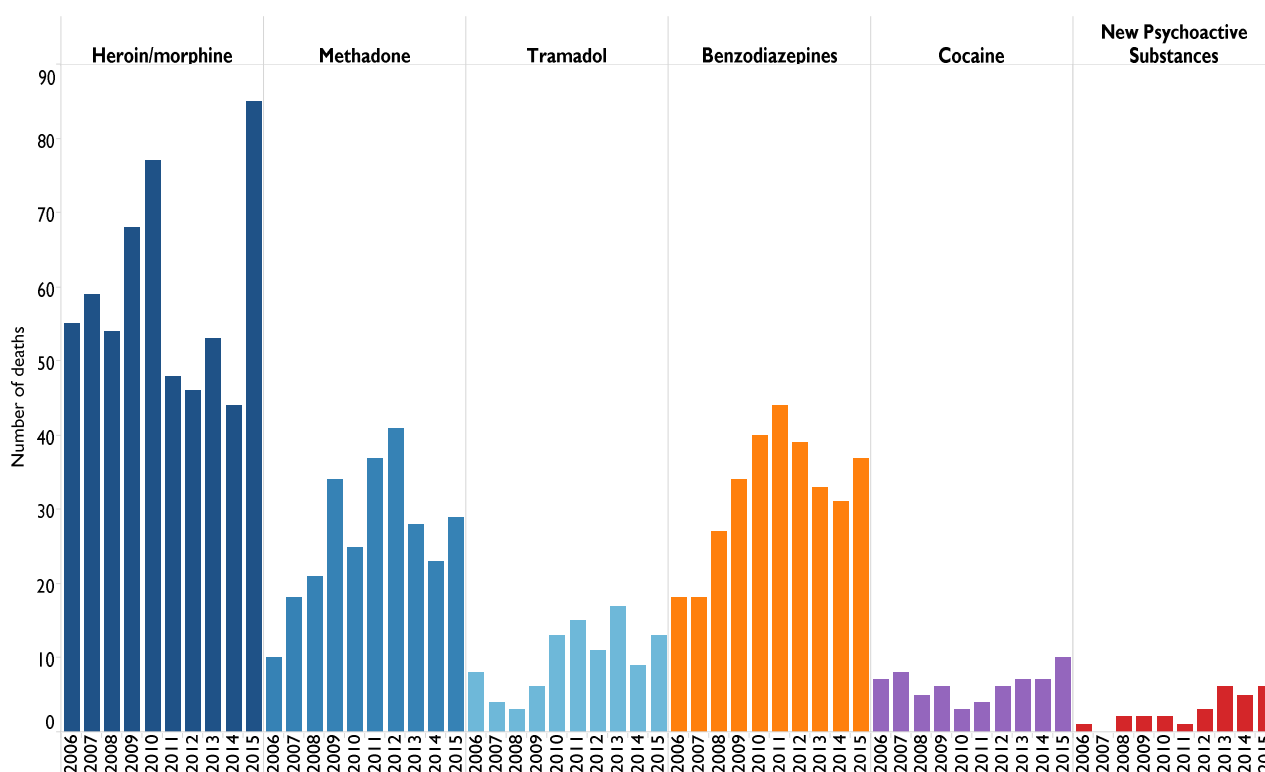
**Chart 47: Number of deaths from drug misuse in Wales by 5 year age band, deaths registered in 2014 and 2015**

## 11.2 Drug misuse deaths by substances reported

Note that more than one substance may be recorded on a death record. The figures in this section relate to all drugs recorded and therefore one death may be counted in relation to more than one substance.

Heroin/morphine was recorded as present in 85 cases, just over half (50.6 per cent) of all drug misuse deaths registered in 2015. This is a substantial increase on 2014, when heroin/morphine was recorded in 38.9 per cent of all cases. Compared with 2014, the number of deaths in which heroin/morphine was present increased by 93.2 per cent. In addition to increases in deaths in which heroin/morphine was mentioned, there were year-on-year increases in deaths in which methadone was mentioned (26.1 per cent, 29 deaths in 2015) and tramadol (56.7 per cent, 13 deaths).

Cocaine was recorded as present in ten deaths, an increase of three from 2014. Just over one in five drug misuse deaths (22 per cent) involved a benzodiazepine, with the 37 deaths recorded representing an increase of 19.4 per cent on 2014. There were six drug misuse deaths registered in which a new psychoactive substance was recorded as present, an increase of one on the previous year. Chart 48 shows the number of deaths over the past ten years in which selected substances have been recorded.



Source: Office for National Statistics, 2016

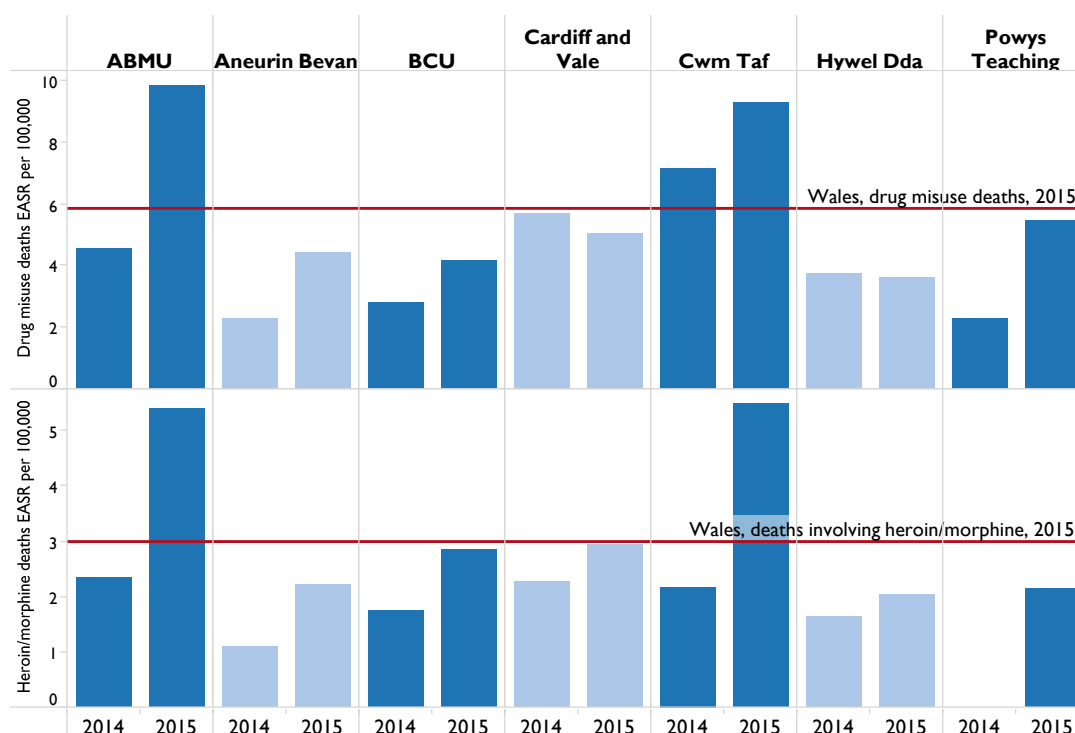
**Chart 48: Number of deaths from drug misuse in Wales in which selected substances were recorded, deaths registered 2006-15**

### 11.3 Drug misuse deaths by Health Board area

The European Age Standardised Rate for drug misuse deaths registered in 2015 in Wales was 5.8 per 100,000, compared with 3.9 per 100,000 population in 2014. In absolute numbers, deaths rose from 113 to 168, an increase of 48.7 per cent, and the rates in

different Health Board areas differed substantially with ABMU recording the highest rate at 9.8 per 100,000 population and Hywel Dda recording the lowest at 3.9 per 100,000 population. The greatest rise in EASR per 100,000 population, at 136.6 per cent was seen in Powys Teaching, followed by ABMU where the EASR per 100,000 increased by 116.2 per cent. The EASR per 100,000 population rose in all other Health Boards except Hywel Dda, where it fell by 2.9 per cent and Cardiff and Vale which saw a fall of 11.1 per cent.

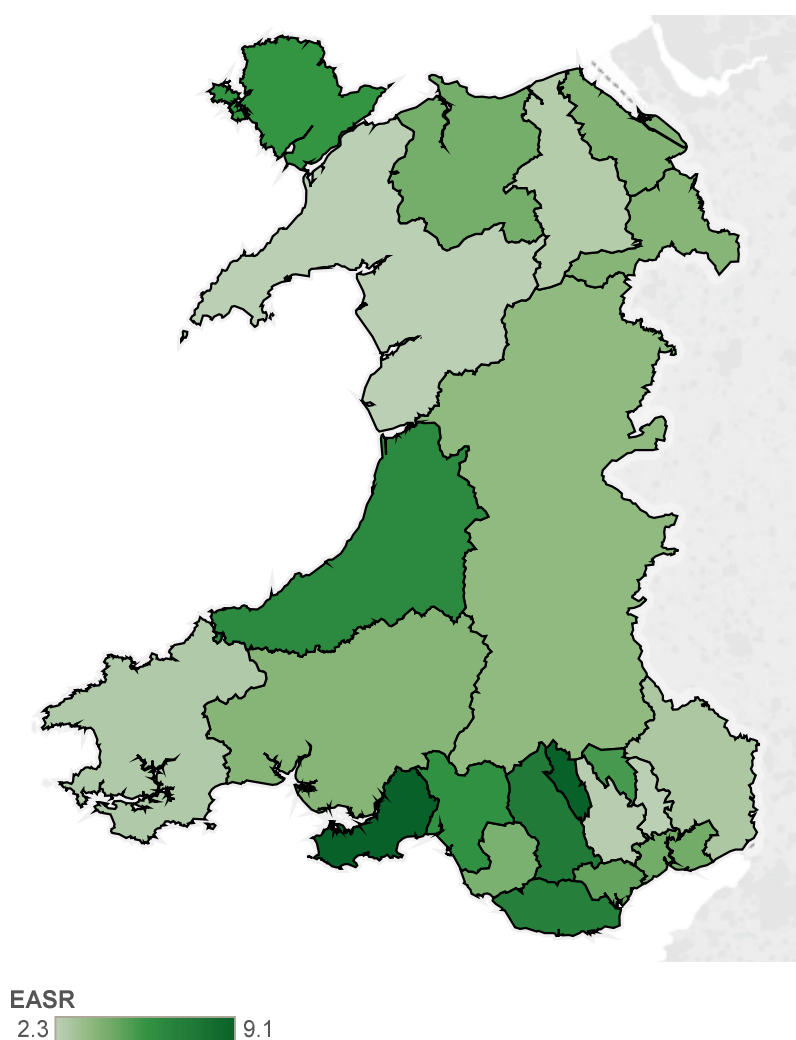
As the figures presented in previous subsections suggest, increases in the overall rate appear to have been driven by greater numbers of deaths involving heroin/morphine, with every area reporting increases in heroin/morphine deaths and the pattern of differences across Health Board areas for these deaths following broadly the pattern for all drug misuse deaths. The EASR per 100,000 population of heroin/morphine deaths for Wales as a whole rose 95.1 per cent to 3 deaths per 100,000 population. Notable increases in the EASR per 100,000 population of heroin/morphine deaths occurred in Powys Teaching, which had no deaths in this category in 2014 but a rate of 2.1 per 100,000 population in 2015, Cwm Taf, where the rate of 5.5 per 100,000 population represented an increase of 152.6 per cent on the previous year and ABMU, which saw an increase of 131.9 per cent to 5.4 per 100,000. Chart 49 shows the EASR per 100,000 for all drug misuse deaths and for those deaths involving heroin/morphine by Health Board area registered in 2014 and 2015.



Source: Office for National Statistics, 2016

**Chart 49: European Age Standardised Rate per 100,000 population of drug misuse deaths in Wales, all and those involving heroin/morphine, deaths registered in 2014 and 2015, by Health Board area**

The Office for National Statistics provides calculations of European Age Standardised Rates by local authority area across the most recent three years to provide a broader perspective on drug misuse deaths. **Figure 3** shows the average EASR per 100,000 population for the most recent three years mapped by local authority and illustrates the geographical variation of drug misuse deaths even between adjacent and relative small areas. Over this period, Swansea and Merthyr Tydfil had the highest EASR at 9.1 per 100,000. Caerphilly, bordering Merthyr Tydfil, had a rate of 2.4 per 100,000 population, amongst the lowest in Wales, whilst the three local authority areas making up Hywel Dda, Ceredigion, Carmarthenshire and Pembrokeshire had rates of 6.3, 3.8 and 2.6 per 100,000 population respectively, putting them in the upper, lower middle and bottom quartiles. These figures, alongside those for Health Board areas above demonstrate that there are complex patterns of similarity and difference between areas over time in relation to drug misuse deaths.



Source: Office for National Statistics, 2016

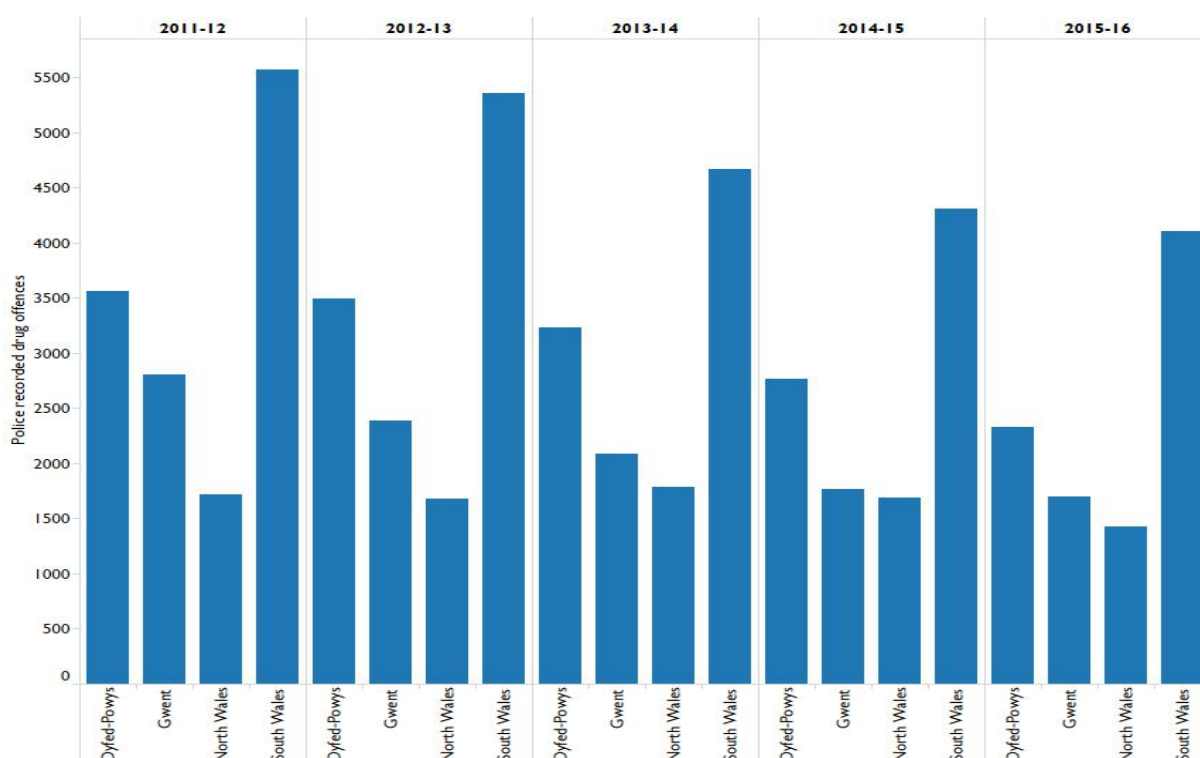
**Figure 3: Average European Age Standardised Rate per 100,000 of deaths from drug misuse registered in Wales, 2013-15**



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

### 12.1 Recorded drugs offences in Wales

Police forces in Wales recorded a total of 9,546 drugs offences in Wales in 2015-16, a fall of 9.3 per cent compared with 2014-15. As in the previous year, South Wales recorded the greatest number of drug offences (4,099) and North Wales the fewest (1,423). The number of drug offences recorded by Welsh police forces for the five years to 2015-16 is shown in Chart 50.



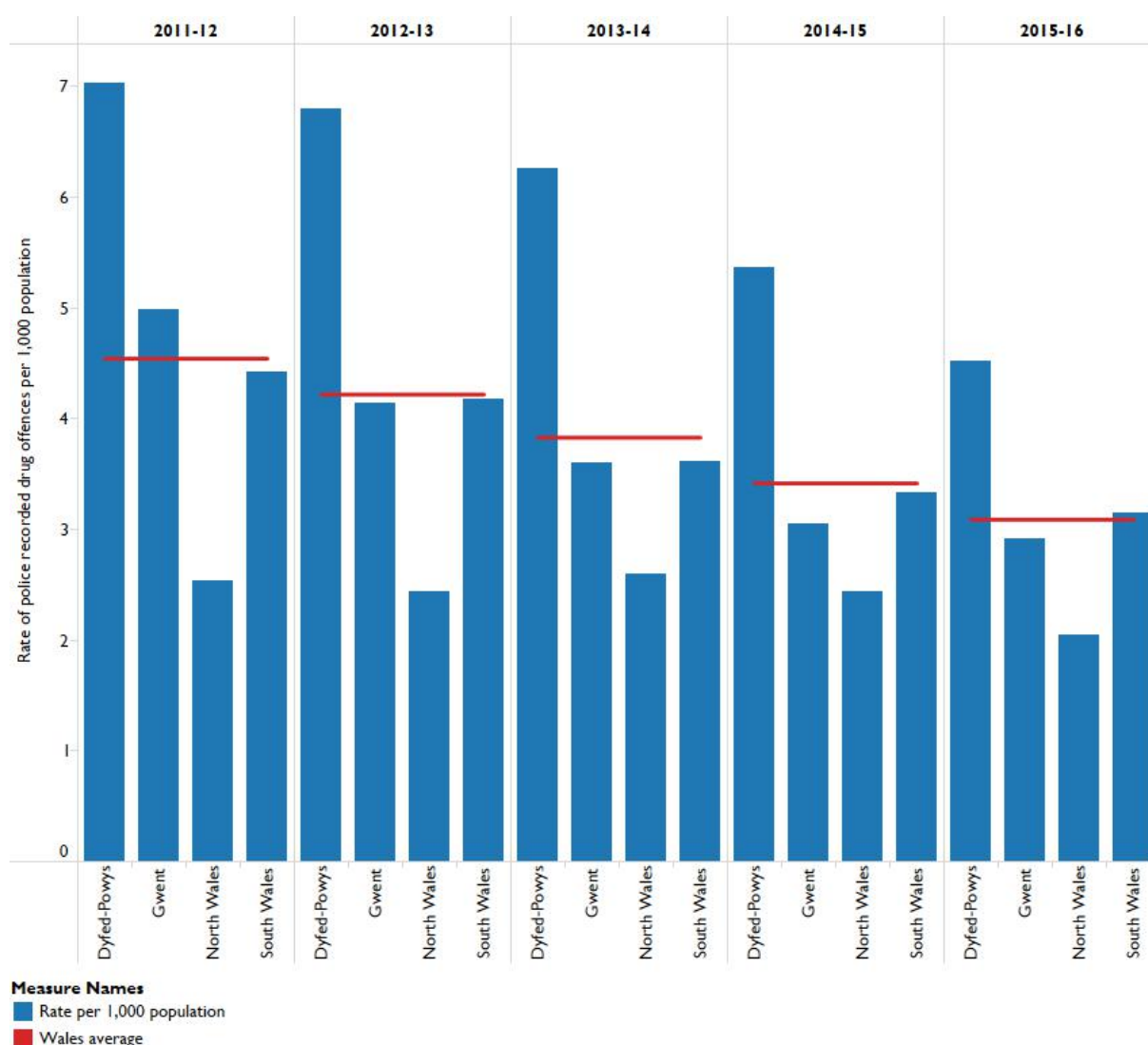
Source: Office for National Statistics, 2016

**Chart 50: Number of drug offences recorded by police forces in Wales by year and police force, 2011-12 to 2015-16**

Fewer drugs offences were recorded in all areas, but the changes were substantially larger in Dyfed-Powys (a reduction of 15.8 per cent) and North Wales (15.6 per cent) compared with South Wales (4.9 per cent) and Gwent (3.9 per cent). These figures compare to a fall in the number of recorded drug offences in England of 13 per cent.

The number of residents in these police territories varies considerably and therefore the rate of drug offences occurring in each area also shows considerable variation. The highest rate of drug offences was recorded in Dyfed Powys, with 4.5 offences committed per 1,000 residents. The lowest rate was recorded North Wales, with 2.1 offences per 1,000 population. The rate for Wales was 3.1 per 1,000 population; for comparison, there were 2.5 drug offences per 1,000 population recorded across England in the period 2015-

16. The rate of police recorded crimes by year and police force area for Wales in 2015-16 is shown in Chart 51.



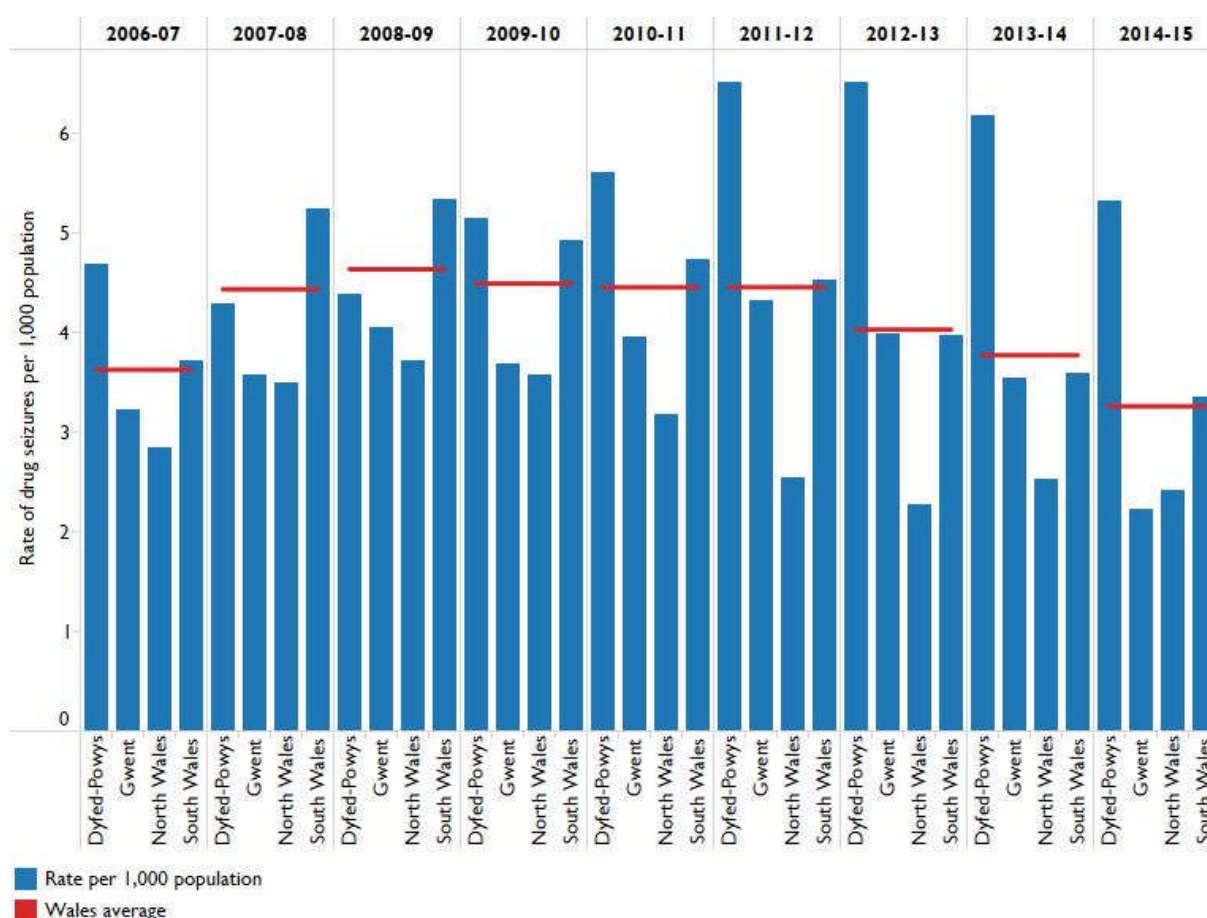
Source: Office for National Statistics, 2016

**Chart 51: Rate per 1,000 population of drug offences recorded by police forces in Wales by year and police force, 2011-12 to 2015-16, including Wales average**

## 12.2 Seizure of illicit drugs in Wales

There were 10,075 seizures of illicit drugs by police forces in Wales in 2014-15, the most recent year for which data are available, a fall of 10.7 per cent compared with 2013-14. This represents 3.3 seizures per 1,000 population in Wales, a rate which has fallen in each of the past three years following a period of stability between 2008-09 and 2011-12 when the rate was steady at 4.5 or 4.6 seizures per 1,000 population. Differences in the rate of seizures between police forces in Wales are similar to differences in the number of recorded drug offences, with Dyfed-Powys recording the highest rate of seizures and the North Wales and Gwent forces recording the lowest rates. Chart 52 shows the rate of

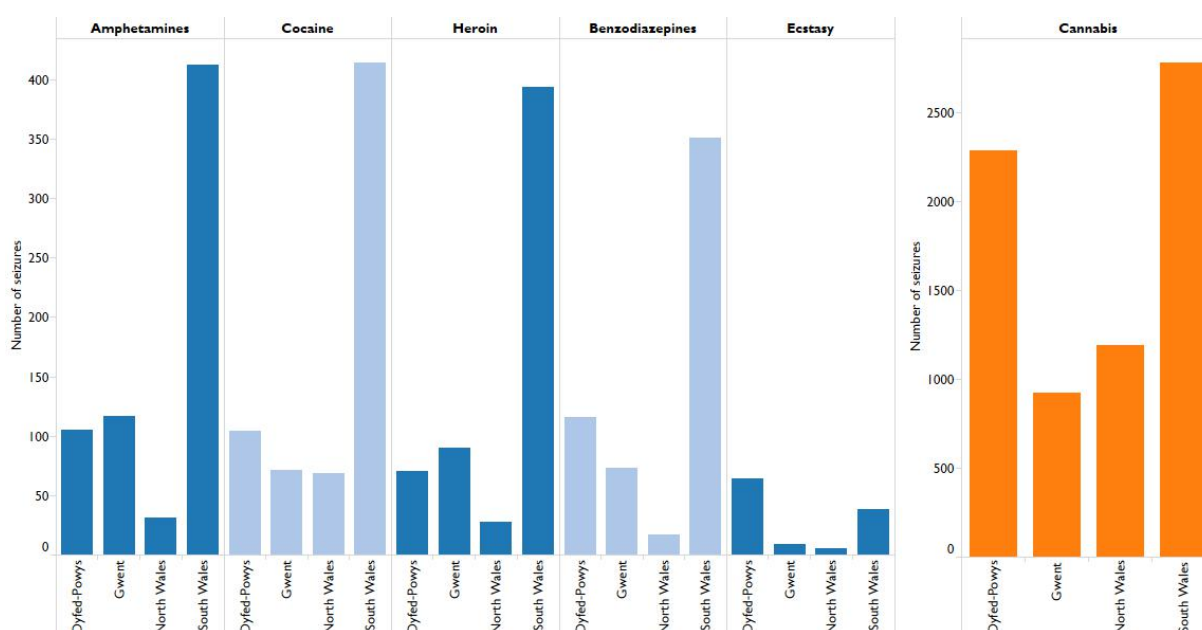
seizures per 1,000 population for each of the four Welsh police forces and the Wales average between 2006-07 and 2014-15.



Source: Home Office, 2015

**Chart 52: Rate of seizures of illicit drugs by police forces in Wales per 1,000 population, by police force and Wales average, 2006-15**

The majority of seizures (7,184, 71.3 per cent) involved cannabis with a further 24.4 per cent of all seizures accounted for by amphetamines (665 seizures), cocaine/crack (658), heroin (582) and benzodiazepines (557). South Wales accounted for 43.3 per cent of all seizures, but tended to record higher proportions of seizures of class A drugs including heroin (67.6 per cent of all seizures in 2014-15) and cocaine (62.9 per cent). It should be noted that for 24 per cent of seizures recorded in North Wales the drug seized was listed as 'unknown'. No other areas recorded any seizures in the category 'unknown' and this makes comparison between areas problematic. Wales has accounted for between 5.7 and 6.3 per cent of all drug seizures in the UK since 2006-07, with 6 per cent of UK seizures occurring in Wales in 2014-15. The number of seizures recorded by police force for selected drugs is shown in Chart 53.

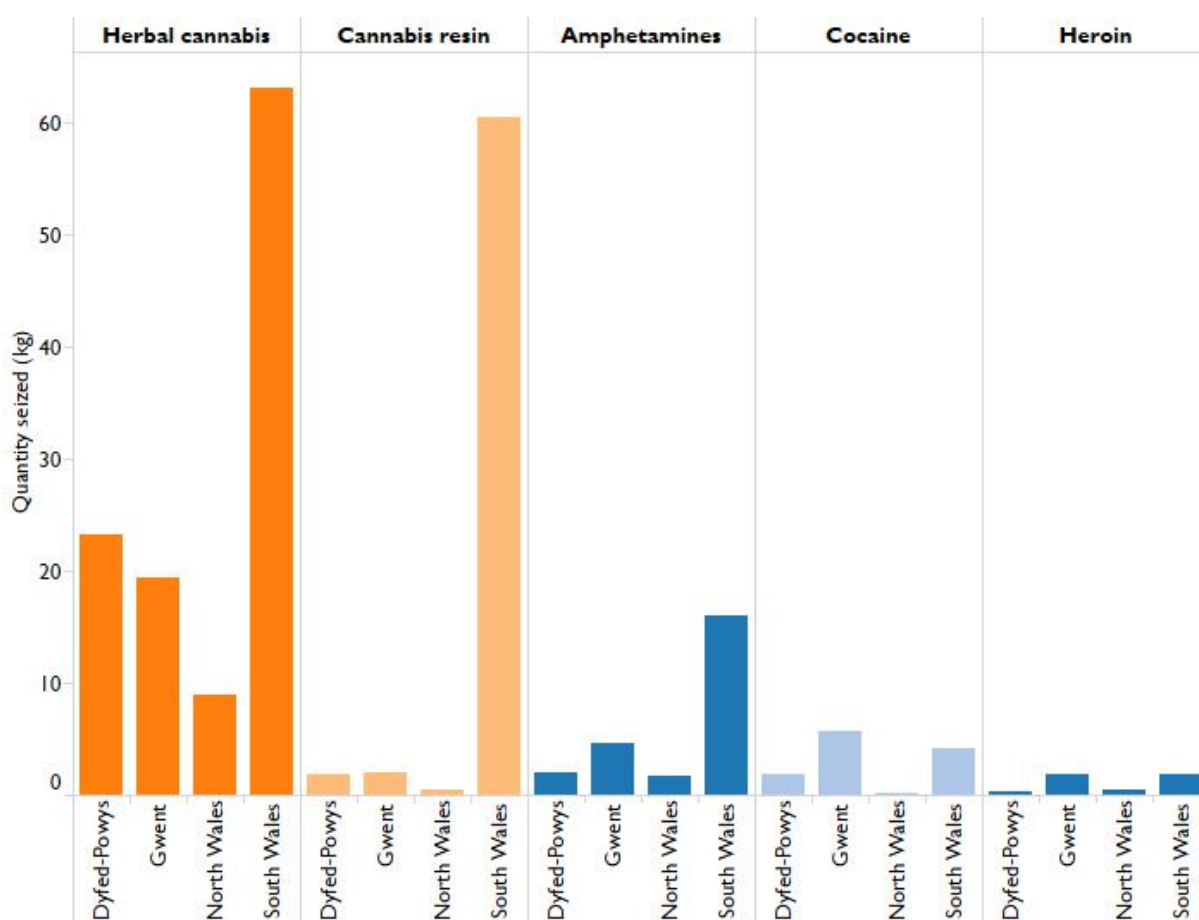


Source: Home Office, 2015

**Chart 53: Number of seizures by Welsh police forces, 2014-15, selected drugs. Note that cannabis seizures are shown on a different scale**

The quantity of illicit drugs seized is reported in kilograms for some drugs and doses for others. Across Wales, cannabis was seized in greater quantities than any other illicit drug, with 114.6kg of herbal cannabis and 64.9kg of cannabis resin seized in 2014-15, in addition to 29,204 cannabis plants. After cannabis, the illicit drugs seized in the greatest quantities by weight in Wales in 2014-15 were amphetamines (24.3kg), cocaine (11.7kg) and heroin (4.3kg). Herbal cannabis seized in Wales represented 2.5 per cent of all herbal cannabis seized by weight in England and Wales, whilst the cannabis resin seized in Wales accounted for 9.7 per cent of all England and Wales seizures by weight. For selected other drugs the proportion in 2014-15 was 4.2 per cent (amphetamines) 1.7 per cent (cocaine) and 0.9 per cent (heroin).

There was considerable variation between police force areas in the amounts seized, not all of which can be explained by the different population sizes in different police areas. Chart 54 shows the quantity of selected drugs seized by police forces in Wales in 2014-15.



Source: Home Office, 2015

**Chart 54: Quantity of illicit drugs seized by Welsh police forces, 2014-15, selected drugs**

As Chart 54 shows, South Wales Police seized 55.1 per cent of all herbal cannabis, 93.2 per cent of all cannabis resin and 65.6 per cent of all amphetamines by weight in 2014-15. However, Gwent police seized the greatest quantity of both cocaine (5.62kg) and heroin (1.86kg).

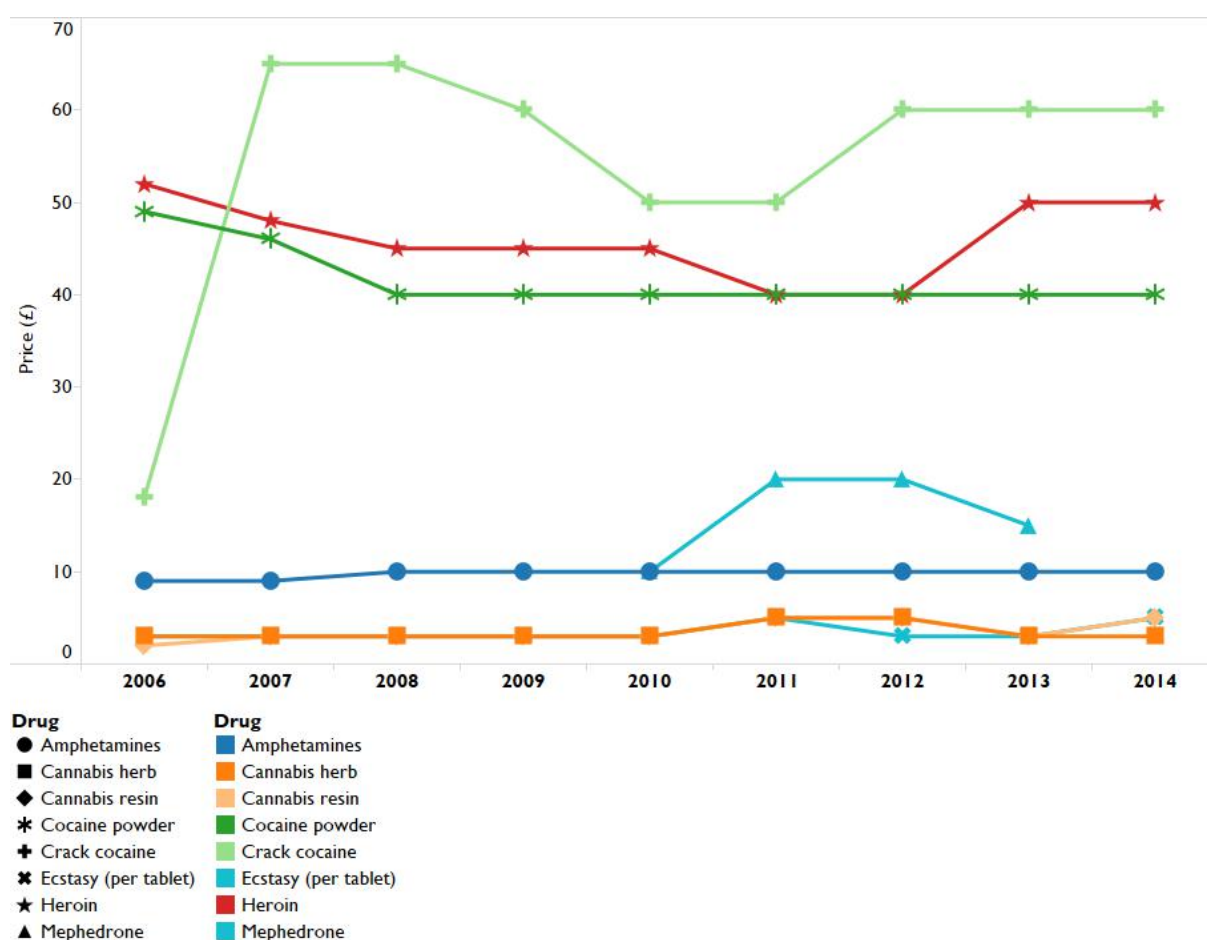
For illicit drug seizures measured by dose, benzodiazepines were by a considerable margin the drug most seized, with 80,780 doses in 2014-15. Ecstasy was the next most commonly seized drug by weight (9,220 doses) followed by methadone (2,280 doses). Fewer than 1,000 doses of any other drug were seized in 2014-15.

### 12.3 Price and purity of selected illicit drugs – UK

Price and purity of selected drugs are reported by UK Focal Point<sup>18</sup>, 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

<sup>18</sup> UK Focal Point annual reports are available at <http://www.nta.nhs.uk/focalpoint.aspx>

enforcement agencies and are adjusted to reflect different levels of purity at different times. These data are not currently broken down by region, therefore the figures presented in this section relate to the UK as a whole. Chart 55 shows the typical street prices of selected illicit drugs in the UK to 2014, the most recent year for which data are available.

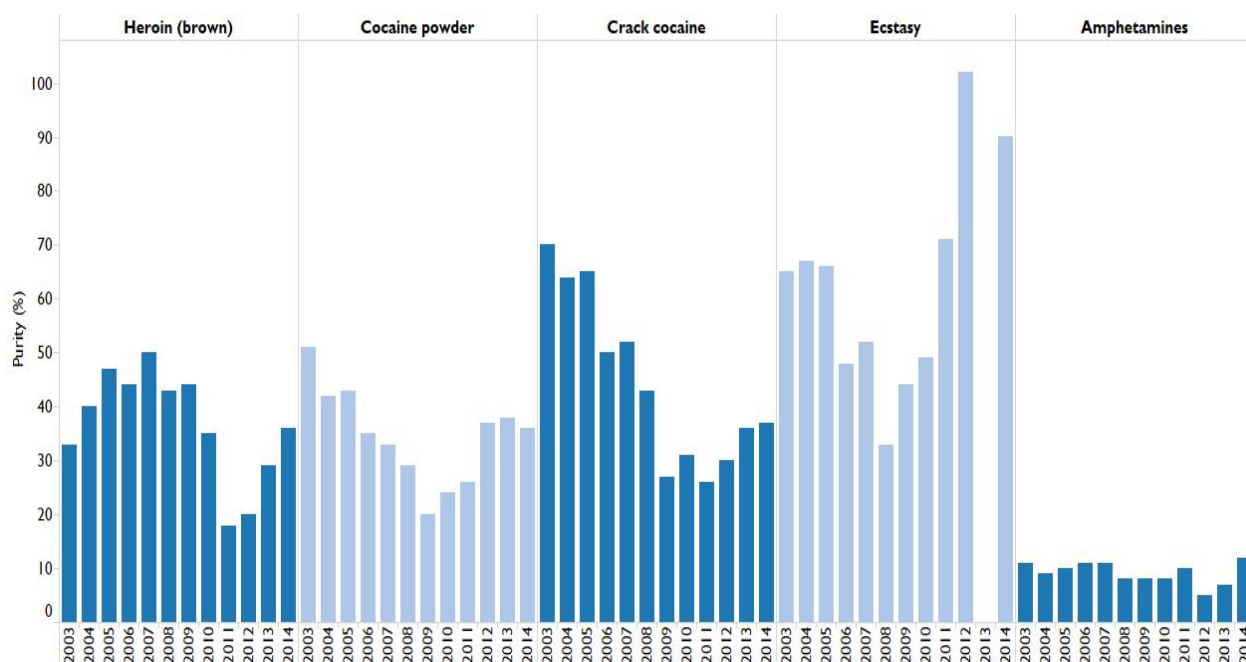


Source: UK Focal Point, 2016

**Chart 55: Typical street price of selected illicit drugs based on law enforcement agency reports, UK, 2006-14. All prices per gram unless otherwise noted.**

Data for the UK suggests that drug prices have remained relatively stable in recent years. No data on mephedrone prices have been published for 2014 and it should be noted that the impact of the Psychoactive Substances Act, which came into force in May 2016 and is intended to restrict the production and supply of substances including mephedrone may change the dynamics of the UK drugs market. In addition to reporting data on prices paid, Focal Point also report 'purity adjusted' figures for heroin and cocaine. Data suggest that these adjusted prices fell for heroin, to £45.52 per gram (8.1 per cent lower than in 2013) but rose to £56.89 per gram for cocaine (an increase of 5.6 per cent). The purity adjusted price of heroin has been falling since 2011, when it was £74.32; 2014 represented the first year in which price has risen for cocaine since 2009, when the per gram price was £100.89.

Data on purity of selected substances seized by the police is shown in Chart 56.



Source: UK Focal Point, 2016

**Chart 56: Mean percentage purity of selected drugs seized by the police in England and Wales, 2003-14**

The purity of heroin, crack cocaine and amphetamines all rose in 2014, by seven, one and five percentage points respectively. The purity of cocaine powder fell by two percentage points, the first fall in purity since 2009. The purity of ecstasy has declined since 2012, although the absence of data for 2013 makes interpreting this reduction more difficult. In the longer term, heroin, cocaine and amphetamines are rising in purity and are in some cases approaching the levels last seen prior to 2009.

## Appendix 1: Hospital admissions related to alcohol, definitions

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

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

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

Dimension	Description and options
<b>Selection of core ICD-10 codes</b>	The choice of ICD-10 codes to include in analysis. For alcohol related admissions, this report uses ICD-10 codes originally produced by produced by Centre for Public Health, Liverpool John Moores University <sup>19</sup> and adopted by Public Health England <sup>20</sup> . These are often referred to as 'Alcohol Attributable Fractions' (' <b>AAF</b> '). Note that analysis of alcohol related deaths in this report used both the AAF definition and the definition used by the Office for National Statistics (' <b>ONS</b> '). See Appendix 2, below. A list of all AAF ICD-10 codes is shown in Table XXX below.
<b>'Specific' or 'attributable'</b>	<b>'Alcohol specific conditions'</b> are commonly defined as those conditions, such as alcoholic liver disease, which are 100 per cent attributable to the use of alcohol. However, alcohol also plays a role in a wider range of ' <b>alcohol attributable conditions</b> '. For example, it is

<sup>19</sup> Jones, L and Bellis, M (2013) Updating England-specific alcohol attributable fractions, Centre for Public Health, Liverpool John Moores University. <http://www.cph.org.uk/wp-content/uploads/2014/03/24892-ALCOHOL-FRACTIONS-REPORT-A4-singles-24.3.14.pdf>, viewed 02.09.16

<sup>20</sup> Public Health England (2015) Local Alcohol Profiles for England 2015 user guide. [http://www.lape.org.uk/downloads/LAPE%20User%20Guide\\_Final.pdf](http://www.lape.org.uk/downloads/LAPE%20User%20Guide_Final.pdf), viewed 02.09.16



	<p>estimated that alcohol plays a causative role in 25-33 per cent of cardiac arrhythmias, with the proportion varying by gender and age<sup>21</sup>. Some external cause codes also have an alcohol-attributable fraction: it has been estimated that 27 per cent of assaults are alcohol-related<sup>21</sup>. As described above, Alcohol attributable fractions (AAF), describing the causative contribution accounted for by alcohol across the population have been calculated for a range of conditions and 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. A list of all AAF ICD-10 codes is shown in Table XXX below.</p>
<b>Diagnostic position</b>	<p>Records can be counted if they include any relevant code in the primary diagnostic position or if they include any relevant code in any (primary or secondary) diagnostic position. When considering alcohol specific conditions (see above) the measure most frequently used is admissions with an alcohol related condition in any position ('<b>any position</b>'); however, figures for admissions with an alcohol related condition in the primary position are also occasionally cited ('<b>primary position</b>').</p> <p>The methods for producing figures for alcohol attributable conditions (see above) also involve calculating measures based on primary and secondary diagnosis; however, there are a number of differences between these calculations and those used to produce alcohol specific figures. A '<b>narrow measure</b>' includes all records in which the primary diagnosis was an alcohol attributable condition OR any secondary diagnosis was an 'external cause' (see list XXX). A '<b>broad measure</b>' includes all records in which any alcohol attributable condition appeared in any diagnostic position. In both cases, where more than one alcohol attributable condition appears in the record, the condition with the highest alcohol attributable fraction is selected.</p> <p>Also, see below for interactions between diagnostic position and person/episode based figures.</p>
<b>Person or admission based</b>	<p>Figures can be calculated for the number of individuals admitted ('<b>person based</b>') or for the total number of admissions ('<b>admission based</b>'), bearing in mind that some individuals will be admitted more than once in a given time period. Person based measures may offer a more useful</p>

<sup>21</sup> Perkins, C and Hennessey, M (2014) Understanding alcohol-related hospital admissions. Chief Knowledge Officer, Public Health Matters blog, Public Health England.  
<https://publichealthmatters.blog.gov.uk/2014/01/15/understanding-alcohol-related-hospital-admissions/>  
viewed 02.09.16

	<p>picture of the health of the population; admission based figures may be more relevant when considering the burden that particular conditions place on services. In general, this report uses person based measures.</p> <p>Following the conventions adopted by Public Health England, Public Health Wales counts person based substance misuse admissions on the basis of a relevant ICD-10 code appearing for any episode of the spell. For admission based figures, only admissions for which the relevant condition appears in the record for the admitting episode are included.</p>
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There is a wide range of technical considerations relating to the development of measures over time and the methods of extracting and analyzing data. Where comparisons between Wales and England are described in this report, figures are considered comparable; however, there may be minor differences in how data are defined and processed. For more detailed discussion on how alcohol related admissions figures are produced for Wales, please see Public Health Wales Observatory (2014) Alcohol and health in Wales 2014, Technical Guide ([http://www2.nphs.wales.nhs.uk:8080/PubHObservatoryProjDocs.nsf/85c50756737f79ac80256f2700534ea3/65ed28d06e1f44fd80257d73002a4e75/\\$FILE/AlcoholAndHealthInWales\\_TechnicalGuide\\_v2a.pdf](http://www2.nphs.wales.nhs.uk:8080/PubHObservatoryProjDocs.nsf/85c50756737f79ac80256f2700534ea3/65ed28d06e1f44fd80257d73002a4e75/$FILE/AlcoholAndHealthInWales_TechnicalGuide_v2a.pdf))

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

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

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

Condition	Code
<b><i>Alcohol specific conditions (100 per cent caused by alcohol)</i></b>	
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
<b>*Codes added to list of alcohol specific conditions in 2013</b>	
<b>Partially alcohol attributable conditions</b>	
<b>Chronic conditions</b>	
<b>Infectious and parasitic diseases</b>	
Tuberculosis	A15-A19
<b>Malignant neoplasm</b>	
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
<b>Diseases of the nervous system</b>	
Epilepsy and Status epilepticus	G40-G41
<b>Cardiovascular disease</b>	
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
<b>Respiratory infections</b>	
Pneumonia	J10.0, J11.0, J12-J15, J18
<b>Digestive disease</b>	
Unspecified liver disease	K73, K74
Cholelithiasis (gall stones)	K80
Acute and chronic pancreatitis	<b>K85, K86.1</b>
<b>Pregnancy and childbirth</b>	
Spontaneous abortion	O03

Low birth weight	P05-P07
<b>Acute conditions</b>	
<b>Unintentional injuries</b>	
Road/pedestrian traffic accidents	*
Poisoning	X40–X49
Fall injuries	W00–W19
Fire injuries	X00–X09
Drowning	W65–W74
Other unintentional injuries	*
<b>Intentional injuries</b>	
Intentional self-harm	X60–X84, Y87.0
Event of undetermined intent	Y10–Y34, Y87.2
Assault	X85–Y09, Y87.1

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

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

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

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

The fourth character details are summarised in Table 8.

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

<b>Fxx0</b>	<p><b>Acute intoxication</b></p> <p>A condition that follows the administration of a psychoactive substance resulting in disturbances in level of consciousness, cognition, perception, affect or behaviour, or other psycho-physiological functions and responses. The disturbances are directly related to the acute pharmacological effects of the substance and resolve with time, with complete recovery, except where tissue damage or other complications have arisen. Complications may include trauma, inhalation of vomitus, delirium, coma, convulsions, and other medical complications. The nature of these complications depends on the pharmacological class of substance and mode of administration.</p> <p>Acute drunkenness in alcoholism</p> <p>"Bad trips" (drugs) Drunkenness NOS Pathological intoxication</p> <p>Trance and possession disorders in psychoactive substance intoxication</p> <p><b>Excludes:</b> <i>intoxication meaning poisoning</i></p>
<b>Fxx1</b>	<p><b>Harmful use</b></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>
<b>Fxx2</b>	<p><b>Dependence syndrome</b></p> <p>A cluster of behavioural, cognitive, and physiological phenomena that develop after repeated substance use and that typically include a strong desire to take the drug, difficulties in controlling its use, persisting in its use despite harmful consequences, a higher priority given to drug use than to other activities and obligations, increased tolerance, and sometimes a physical withdrawal state.</p> <p>The dependence syndrome may be present for a specific psychoactive substance (e.g. tobacco, alcohol, or diazepam), for a class of substances (e.g. opioid drugs), or for a wider range of pharmacologically different psychoactive substances.</p> <p>Chronic alcoholism</p>

	<p>Dipsomania</p> <p>Drug addiction</p>
<b>Fxx3</b>	<p><b>Withdrawal state</b></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>
<b>Fxx4</b>	<p><b>Withdrawal state with delirium</b></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>
<b>Fxx5</b>	<p><b>Psychotic disorder</b></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"> <li>· hallucinosis</li> <li>· jealousy</li> <li>· paranoia</li> </ul> <p><b>Excludes:</b> alcohol- or other psychoactive substance-induced residual and late-onset psychotic disorder ( <a href="#">F10-F19</a> with common fourth character .7)</p>

<b>Fxx6</b>	<p><b>Amnesic syndrome</b></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</p> <p>Korsakov's psychosis or syndrome, alcohol- or other psychoactive substance-induced or unspecified</p> <p><b>Excludes:</b> <i>nonalcoholic Korsakov's psychosis or syndrome ( F04)</i></p>
<b>Fxx7</b>	<p><b>Residual and late-onset psychotic disorder</b></p> <p>A disorder in which alcohol- or psychoactive substance-induced changes of cognition, affect, personality, or behaviour persist beyond the period during which a direct psychoactive substance-related effect might reasonably be assumed to be operating. Onset of the disorder should be directly related to the use of the psychoactive substance. Cases in which initial onset of the state occurs later than episode(s) of such substance use should be coded here only where clear and strong evidence is available to attribute the state to the residual effect of the psychoactive substance. Flashbacks may be distinguished from psychotic state partly by their episodic nature, frequently of very short duration, and by their duplication of previous alcohol- or other psychoactive substance-related experiences.</p> <p>Alcoholic dementia NOS</p> <p>Chronic alcoholic brain syndrome</p> <p>Dementia and other milder forms of persisting impairment of cognitive functions</p> <p>Flashbacks</p> <p>Late-onset psychoactive substance-induced psychotic disorder</p> <p>Post hallucinogen perception disorder</p> <p>Residual:</p> <ul style="list-style-type: none"> <li>· affective disorder</li> <li>· disorder of personality and behaviour</li> </ul>

	<p><b>Excludes:</b> alcohol- or psychoactive substance-induced:</p> <ul style="list-style-type: none"> <li>· Korsakov's syndrome ( <a href="#">F10-F19</a> with common fourth character .6)</li> <li>· psychotic state ( <a href="#">F10-F19</a> with common fourth character .5)</li> </ul>
<b>Fxx8</b>	<b>Other mental and behavioural disorders</b>
<b>Fxx9</b>	<b>Unspecified mental and behavioural disorder</b>



## Appendix 2: Alcohol related deaths, definitions

As described in Appendix 1, there are two sets of figures available to describe alcohol related deaths, one used by Public Health England (the Alcohol Attributable Fractions, AAF) and one produced by the Office for National Statistics (ONS). Both of these methodologies define an 'alcohol related death' in terms of the 'underlying cause' (i.e. the cause which was identified by the attending doctor as having initiated the sequence of events that led to death) and do not consider the impact of other alcohol related conditions that may be mentioned on the death record. Both methodologies can be used to produce 'alcohol specific' figures (i.e. including those conditions which are entirely attributable to alcohol – see Appendix 1). As shown in Table 9, the ICD-10 codes (see Appendix 1) used to define each set of 'alcohol specific' figures overlap considerably, but are not identical.

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

Condition	Code	Included in ONS definition?	Included in AAF definition?
Alcohol-induced pseudo-Cushing's syndrome	E24.4		✓
Mental and behavioural disorders due to use of alcohol	F10*	✓	✓
Degeneration of nervous system due to alcohol	G31.2	✓	✓
Alcoholic polyneuropathy	G62.1	✓	✓
Alcoholic myopathy	G72.1		✓
Alcoholic cardiomyopathy	I42.6	✓	✓
Alcoholic gastritis	K29.2	✓	✓
Alcoholic liver disease	K70*	✓	✓
Chronic hepatitis, not elsewhere classified	K73*	✓	
Fibrosis and cirrhosis of liver	K74 (Excluding K74.3-K74.5 - Biliary	✓	

	cirrhosis)		
Alcohol-induced acute pancreatitis	K85.2		✓
Alcohol-induced chronic pancreatitis	K86.0	✓	✓
Foetal alcohol syndrome (dysmorphic)	Q86.0		✓
Excess alcohol blood levels	R78.0		✓
Ethanol poisoning	T51.0		✓
Methanol poisoning	T51.1		✓
Toxic effect of alcohol, unspecified	T51.9		✓
Accidental poisoning by and exposure to alcohol	X45*	✓	✓
Intentional self-poisoning by and exposure to alcohol	X65*	✓	✓
Poisoning by and exposure to alcohol, undetermined intent	Y15*	✓	✓
Evidence of alcohol involvement determined by blood alcohol level	Y90		✓
Evidence of alcohol involvement determined by level of intoxication	Y91		✓
*include all four character codes falling under this three character code			

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

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

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

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

And for Alcohol Attributable Fractions at:

Public Health Wales Observatory (2014) Alcohol and health in Wales 2014, Technical Guide  
([http://www2.nphs.wales.nhs.uk:8080/PubHObservatoryProjDocs.nsf/85c50756737f79ac80256f2700534ea3/65ed28d06e1f44fd80257d73002a4e75/\\$FILE/AlcoholAndHealthInWales\\_TechnicalGuide\\_v2a.pdf](http://www2.nphs.wales.nhs.uk:8080/PubHObservatoryProjDocs.nsf/85c50756737f79ac80256f2700534ea3/65ed28d06e1f44fd80257d73002a4e75/$FILE/AlcoholAndHealthInWales_TechnicalGuide_v2a.pdf))

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

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

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

For details of the different ways to measure hospital admissions for substance misuse in general, see Appendix 1. This Appendix deals specifically with the different ICD-10 codes (see Appendix 1) that are used to produce figures for poisoning by illicit drugs that appear in this report.

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

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

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

Measure	ICD-10 codes
Any illicit drug use	F11-F16, F18, F19, T40, T424, T436
Any mental/behavioural condition (NHS Digital definition)	F11-F16, F18, F19
Any poisoning by illicit drugs (NHS Digital definition)	T400-T403, T405-T409, T436
Opioids	F11, T400-T403  (Note that although T404 includes opioids such as pethidine and tramadol which may be used illicitly, this code has been excluded in line with current NHS Digital methodology. This exclusion may be reviewed in future years. category not currently used, although includes pethidine and (since 2014 Tramadol – may adjust in future years)
Cannabinoids	F12, T407

Sedatives and hypnotics	F13, T408, T409
Cocaine	F14, T405
Other stimulants	F15, T436
Multiple drug use	F19
Benzodiazepines	T424

Note that these definitions of hospital admissions related to illicit drugs have been changed since the last report, therefore figures presented in this report may not be directly comparable to figures presented in previous reports.

## 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 record<sup>33</sup>. The ICD-10 codes used by the ONS to define drug related deaths are shown in Table 7

'Illicit drugs' are defined in terms of the 1971 Misuse of Drugs Act, which may be amended by the Home Secretary to add or remove drugs. For the 2013 figures for deaths from drug misuse, the ONS used a list of 'illicit drugs' that contained 20 newly controlled drugs compared to the previous year<sup>34</sup>. The ONS also recalculated the figures for deaths from drug misuse for previous years. This new methodology changed the number of deaths in Wales that are considered to be caused by drug misuse. For example, for 2012 the number of deaths rose from 131 using the old methodology to 135. Therefore, figures presented in this report may differ from figures presented in previous reports. A list of substances added to the definition of 'illicit drugs' for the ONS report on drug related deaths in 2013 is given in Table 8.

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

Condition	Code
<i>All deaths in which the following conditions are noted as the underlying cause</i>	
Mental and behavioural disorders due to opioids, cocaine, sedatives or hypnotics, cocaine, other stimulants including caffeine, hallucinogens, multiple drug use	F11–F16,F19
<i>All deaths in which the following conditions are noted as the underlying cause AND a drug controlled by the 1971 Misuse of Drugs Act is noted on the death record</i>	
Mental and behavioural disorders due to volatile solvents	F18
Accidental poisoning by drugs, medicaments and biological substances	X40–X44
Intentional self-poisoning by drugs, medicaments and biological substances	X60–X64
Assault by drugs, medicaments and biological substances	X85

Poisoning by drugs, medicaments and biological substances, undetermined intent	Y10–Y14
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Office for National Statistics (2015) Deaths Related to Drug Poisoning in England and Wales, 2014. London, The Stationery Office

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

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

**Table 12: Substances listed by the Office for National Statistics as ‘new psychoactive substances’**

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

## Appendix 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<sup>22</sup>:*

### Confidence intervals

A confidence interval is a range of values that is used to quantify the imprecision in the estimate of a particular value. Specifically, it quantifies the imprecision that results from random variation in the estimation of the value; it does not include imprecision resulting from systematic error (bias).

In many studies the source of this random variation is sampling. Even in the best designed studies there will be random differences between the particular sample group selected and the overall target population of inference.

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

The width of the confidence interval depends on three things:

- The sample size from which the estimate is derived (or population size if derived from a complete data set). Larger samples give more precise estimates with smaller confidence intervals.
- The degree of variability in the phenomenon being measured. Fortunately, observed phenomena often are known, or assumed, to follow certain probability distributions, such as the Poisson or Binomial. This allows us to express the amount of variability mathematically, and build it into the confidence interval formulae.
- The required level of confidence - this is an arbitrary value set by the analyst giving the desired probability that the interval includes the true value. In medicine and public health, the conventional practice is to use 95 per cent confidence but it is not uncommon to see alternatives. Within the APHO community 99.8 per cent confidence intervals are increasingly being used alongside 95 per cent intervals to reflect the control limits used in Statistical Process Control approaches. Increasing the level of confidence results in wider limits. For a given level of confidence, the wider the confidence interval, the greater the uncertainty in the estimate.

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<sup>22</sup> Association of Public Health Observatories (2008) Technical Briefing 3, Commonly Used Public Health Statistics and their Confidence Intervals, [www.apho.org.uk/resource/view.aspx?RID=48457](http://www.apho.org.uk/resource/view.aspx?RID=48457)



## 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<sup>23</sup>:*

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>.

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<sup>23</sup> Association of Public Health Observatories (2008) Technical Briefing 3, Commonly Used Public Health Statistics and their Confidence Intervals, [www.apho.org.uk/resource/view.aspx?RID=48457](http://www.apho.org.uk/resource/view.aspx?RID=48457)

## **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'. This definition specifically includes regular or long-term use of prescribed opioids such as methadone but does not include their rare or irregular use nor the use of other drugs, such as ecstasy or cannabis<sup>24</sup>.

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

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

Whilst this approach is still used by many researchers, there is current debate within the field of drug misuse estimation over the possibility that recently developed Bayesian techniques for population estimation, which calculate an estimate of the uncaptured drug users using an average across all models, and thus formally accounting for model uncertainty within the population estimate<sup>25</sup>. The figures presented in this report are those derived from applying Bayesian techniques to the data.

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<sup>24</sup> EMCDDA (2010), Statistical bulletin 2010: Problem drug use indicator – overview. Lisbon, EMCDDA <http://www.emcdda.europa.eu/www/advancedsearch.cfm>

<sup>25</sup> 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

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